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ABSTRACT

A task force appointed by the Tennessee Legislature was charged with examining state public education in the areas of educational goals, governance, quality, and fund distribution. Subcommittees were formed to study K-12 education, vocational-technical education, higher education, and professional schools. Multiple techniques were utilized to gather data. Four statewide surveys gathered information from the general public and from teachers, administrators, board members, and others at the K-12, vocational-technical, and higher education levels. The first chapter, on the organizational plan of the study, is followed by economic and financial factors affecting public education and a review of state educational legislation and its shortcomings. The four subcommittee chapters contain the committees' assessments and their immediate and long-term recommendations. The last chapter summarizes the study findings and contains the recommendations approved by the entire task force. The appendixes contain legislation authorizing the study, data tables, and bibliographies for each chapter. (MLF)

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1981-82

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THE TENNESSEE COMPREHENSIVE EDUCATION STUDY

STATE OF TENNESSEE

A TASK FORCE REVIEW
OF
PUBLIC EDUCATION

December, 1982
Nashville, Tennessee

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Grateful appreciation is also expressed to the personnel of professional agencies who were extremely helpful, including the Education Commission of the States, the Southern Regional Education Board, the Tennessee Advisory Council on Vocational Education, the Tennessee Education Association, and the Tennessee School Board Association.

Others deserving recognition are those who participated in the pretesting of the survey instruments, including the staff and faculty at Brownsville Road Elementary School in Memphis, Nashville State Technical Institute, Volunteer State Community College in Gallatin, Belmont College, and the George Peabody College for Teachers, Vanderbilt University in Nashville.

A special note of thanks is extended to the Chancellor and Deans of the state's professional schools for their contributions to the chapter on professional schools.

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PREFACE

During the 1980s, serious thought provoking situations are present for leaders in government and education to ponder. An economic recession with accompanying unemployment, the decline in certain areas of heavy industry, and the emergence of high technology industries are conditions that deserve attention. The decreasing cost of computerized information processing and the increasing reliance by government and business on data treatment, storage, and rapid retrieval must be considered.

In Tennessee, the largest expenditure of public funds (47.2 percent in 1980-81) is appropriated to public education. The total population of the state has grown at the rate of approximately 11 percent during the last decade, and the corresponding public education enrollments will begin to increase during this decade. Even with a slightly reduced inflation rate, the cost of public education is projected to increase significantly during this period.

Public confidence in government and education appears to be low and attempts to place a ceiling on taxation in some states demonstrate dissatisfaction. Adding to the dilemma in education, the role of the federal government is declining which results in more funding pressure directed to the state. State governors and legislators are feeling this pressure and are emerging as more dominant forces in determining the future of public education than in the past. In some cases, the push for increased funding from the state has been countered with the proposition that before an additional tax burden is imposed, improved quality should be assured. To obtain the perceptions of Tennesseans, a statewide survey was conducted and their assessment of the current image of public education was as follows: fair (42.3 percent), good (32.2. percent), poor (19.8 percent), excellent (less than one percent), and no opinion (4.8 percent). The responses to the statement that Tennessee higher education is as good as the higher education in the other Southern Regional states were rated: agree (44.5 percent), disagree (12.8 percent), strongly agree (9.3 percent), strongly disagree (6.6 percent), and no opinion (25.1 percent).

The Tennessee General Assembly, led by Lieutenant Governor John Wilder and Speaker of the House of Representatives Ned McWherter, demonstrated courage and foresight in passing Senate Joint Resolution No. 56; and Governor Lamar Alexander displayed his support by signing the bill into law. The Resolution is the enabling legislation which makes provision for the Tennessee Comprehensive Education Study. Twenty-five years have elapsed since the last legislative task force completed a comprehensive study of public education in Tennessee.

The opportunity to assess public education and to recommend needed improvements was a challenging and formidable task. To set the direction for the future, new goals were needed at each educational level. To ensure the responsiveness and the efficiency in the delivery of educational services, the overall governance system was examined. To assist in determining demonstrated effectiveness, instructional quality was reviewed at all levels. To improve funding procedures, the distribution of funds was investigated.

December, 1982

William H. Payne
Executive Director

CHAPTER ONE

ORGANIZATIONAL PLAN OF THE STUDY

I. STATEMENT OF THE PROBLEM

The purpose of this study is to examine defined areas of Tennessee public education and to develop a plan addressing the areas reviewed. The study is designed to answer the following questions:

1. How will demographic, economic, and financial factors influence the future of public education?
2. What is the status of the educational laws that give direction to all levels of education?
3. What goals can be identified for each educational component?
4. How well does the present governance structure serve public education in the state?
5. What indications of instructional quality can be determined in each educational component?
6. How well do the present procedures of fund distribution serve each level of public education?
7. What identified needs and recommended changes should be included in the future plan?

II. MAJOR GOAL OF THE STUDY

The major goal of the study is to develop a long range plan for all levels of public education in Tennessee. The areas of examination contained in the plan include educational goals, governance, instructional quality, and distribution of funds. The following objectives were identified by the Task Force to reach this goal:

1. to accomplish an educational economic and financial forecast
2. to review the education statutes in the Tennessee Code Annotated
3. to determine educational goals for all levels of Tennessee public education
4. to examine the governance and organizational structures of the total educational system
5. to conduct a statewide assessment of public education
6. to review the present procedures utilized in the distribution of funds to each level of public education.

III. SIMILAR STUDIES

Similar statewide studies of public education were authorized by the Tennessee General Assembly in 1933, 1945, and 1955. A recent ERIC search revealed that during the past three years, sixteen statewide surveys have been completed nationwide on the topics of educational assessment, finance, or facilities. In the southern region, eleven master plans or statewide reviews are presently being conducted (Musick, 1981, 1).

IV. LIMITATIONS

This study is comprehensive in nature because it includes all levels of public education, kindergarten through higher education. However, the study was limited in its scope to a determination of educational goals, an examination of governance and organizational structure, a review of instructional quality, and a review of fund distribution in each component. The study was further limited by the projected time period of one year with the projected completion date of January 1, 1983, and by budgetary limitations.

V. ORGANIZATION OF THE TASK FORCE

The Task Force was organized into several committees to focus on the different educational components of the study. A Coordinating Committee was formed to provide leadership in determining the continued direction of the study, to monitor the progress of the study, and to assimilate the various subcommittee reports into a coordinated long range plan for public education in Tennessee. Subcommittees were formed in the areas of kindergarten through grade twelve (K-12), vocational-technical education (secondary and postsecondary), higher education, and professional schools (medical, dental, law, and veterinary medicine).

VI. STUDY DESIGN

The enabling legislation which provided for the comprehensive study of public education in Tennessee indicated that the task force should formulate educational goals, make an assessment of the current state of public education, and recommend solutions to address identified problems (see A-1 in Appendix A). The Coordinating Committee implemented the legislative intent by adopting a general research outline which focused on educational goal determination, governance, quality, and fund distribution. Each of the four subcommittee outlines reflects these areas of investigation plus additional topics appropriate to its particular area of inquiry (see A-3 in Appendix A).

The methodology for gathering the data on each topic of inquiry varied, and multiple techniques were utilized. The Task Force members had varied backgrounds and experience, and provided information formally at the committee meetings plus informal input was secured on an individual basis. The staff used the following techniques to gather the needed information:

1. a research of the literature
2. a review of recent studies done by cooperating state agencies
3. testimony from resource persons who appeared before the various subcommittees
4. open public hearings
5. contractual agreements for research work to be done by qualified impartial experts
6. a review of standardized test results
7. statewide surveys.

VII. STATEWIDE SURVEYS

Because of the diversity of this investigation, the Coordinating Committee authorized four statewide surveys to assist in assessing the current state of public education in Tennessee. Surveys are used for descriptive, explanatory, and exploratory purposes and are chiefly used in studies that have individual people as the units of analysis (Babbie, 1979, 315). The four surveys were designed to gather information from the following groups: (1) the general public; (2) K-12 teachers, administrators, board members, and parents; (3) vocational-technical teachers, administrators, board members, advisory council chairpersons, and business representatives; (4) higher education instructors, administrators, board members, and legislators. In all four surveys the random samples selected were computed to satisfy a .05 level of significance (Hausken, 1963, 3-4). In interpreting survey results, the measure of consensus was used to help clarify the points of agreement. The sampling error, the extent to which the results may differ if the total population had been sampled, was computed for each of the four surveys (Neter, 1978, 300).

The General Public Education Survey

The general public education survey was designed to assess public opinion on statewide educational issues including the image of public education, student mastery of basic skills, educational quality at all levels, vocational-technical skill development, funding, and access to higher education. According to the 1980 census, the population in Tennessee totaled 4,591,120. The largest statewide file of residents available to the study staff was the 2.7 million people who hold a state automobile operator license. This survey population excluded the 1,129,115 residents of age less than sixteen who do not qualify for an operator license. Since the survey was accomplished by mailing printed questionnaires, some reading proficiency was needed on the part of the respondent. The fact that the sampling frame of 2.7 million people passed a written test as a partial requirement for obtaining a state automobile operator license should have reduced the percentage of illiterate questionnaire recipients. In addition to persons less than age sixteen, approximately 762,000 additional persons were excluded from the survey population because they did not have state automobile operator licenses.

The names and addresses of the 2.7 million survey population were included in a computer file at the Department of Safety, and the computerized random sample was generated by the Statistical Package for the Social Sciences (SPSS) which insured that every name in the sampling frame had an equal chance of selection. Prior to the random selection, it was determined that a sample size of 500 would be drawn; this sample well exceeded the minimum number required to ensure that if repeated samples were generated, they would be similar. The following table displays the numerical breakdown of the survey.

General Public Education Survey

Survey Population	Survey Sample	Survey Frame	Response Frequency	Response Percentage
2.7 Million	500	Holders of State Automobile Operators Licenses	227*	45

*Estimated sampling error ±5%

The demographic composition of the sample respondents revealed diversification with broad representation in the categories of information gathered. The education levels of the respondents ranged from 12.6 percent of the group with an elementary education (grades 1-6) to 9.9 percent with graduate study beyond an undergraduate degree. Other categories included 12.6 percent with a junior high education (grades 7-9), 51.8 percent with a high school education, and 19.9 percent with a college undergraduate degree. The family income levels ranged from 13.8 percent less than $8000 per year to 7.8 percent over $50,000 per year. Respondents with family incomes of $8000 to $15,000 accounted for 18.4 percent, while the categories of $15,000 to $30,000 were 32.7 percent and $30,000 to $50,000 were 27.2 percent. The type of communities in which the respondents resided included 30.9 percent in rural communities, 26.9 percent in small towns, 28.3 percent in suburban communities, and 13.9 percent in urban areas. In the area of employment status, 62.8 percent of the group were employed, 26 percent were unemployed, and 11.2 percent were retired. Fifty-six percent of the respondents were born in Tennessee, 69.3 percent had attended public schools here, and 60.4 percent had children who attended Tennessee public schools.

The Public Education Survey, Grades K-12

The public education survey for grades K-12 was designed to gather perceptions of teachers, administrators, board members, and parents regarding the present state of Tennessee public education. The areas investigated were educational goal identification, governance, quality, and funding. The groups selected to be represented in the survey had direct contact with and a vested interest in K-12 public education. To assist in assessing the current state of public education, a needs assessment section of the questionnaire was designed for educators. This procedure is defined by Boruch and Cordray as "descriptive studies undertaken prior to creation or modification of a program to establish what needs are, their scope, and their severity in particular target groups" (Boruch and Cordray, 1980, 2-7).

The K-12 questionnaire was developed with the assistance of experts from the State Department of Education, the University of Tennessee College of Education, and the State Testing and Evaluation Center. The instrument was critiqued and approved by the Coordinating Committee and was pretested at Brownsville Elementary School in Memphis.

In planning the survey population, the determination was made to survey the total population of each frame when the size of the group was not prohibitive. Each member of the State Board of Education, each chairperson of local boards of education, each superintendent, and each local school system's coordinator of instruction was mailed a questionnaire. The principals, teachers, and parents were selected by utilizing a process of random school selection. The 1980-81 statewide statistical report listed 1,578 public school units, excluding vocational centers, special education centers, and units classified as "others." Within that total, 294 school units representing 18.6 percent of the schools were classified as high schools. A random sample of 370 school units was computed to exceed significantly the sample size requirements, and the computerized random selection was accomplished by the SPSS program with at least 18.6 percent of the schools including grades nine through twelve.

All 370 principals of the schools selected were included in the survey, and the number of teachers and parents selected within the schools was determined by totaling the number of teachers and students and randomly selecting the required number. The following table illustrates the breakdown of numbers for each group.

Public Education Survey, Grades K-12

Survey Population	Survey Sample	Survey Frames	Response Frequency	Response Percentage
11	11	State Board of Education	5	45
147	147	Local Board of Education Chairpersons	87	59
146	146	Superintendents	110	75
146	146	Coordinators of Instruction	107	73
1,578	370	Principals	272	74
6,895	386	Elementary Teachers	291	75
2,802	337	Secondary Teachers	257	76
124,292	386	Elementary Parents	274	71
56,637	379	Secondary Parents	256	68
192,654	2,308		1,659*	72

*Estimated sampling error ±2%

The Vocational-Technical Survey

The public education survey for vocational-technical education was designed to obtain information concerning both secondary and postsecondary programs. Perceptions were gathered from the educational community, general advisory committees, and representatives of business and industry. The groups selected to participate in the survey were directly involved in the various phases of vocational-technical education. The recipients selected to receive a questionnaire were requested to respond to statements concerning goal setting, quality of governance, instruction, and funding.

The development of the vocational-technical questionnaire was aided by expert consultation from the State Division of Vocational-Technical Education, selected presidents of community colleges and technical institutes, and the Bureau of Educational Research at the University of Tennessee, Knoxville. The survey instrument was critiqued and approved by the Coordinating Committee and was pretested at Volunteer State Community College and Nashville State Technical Institute.

The survey population included the total population of the State Board of Vocational Education, community college presidents, technical institute presidents, area vocational-technical school superintendents/directors, coordinators of instruction (postsecondary), comprehensive high school principals, vocational center principals, and coordinators of placement. The chairpersons of advisory committees, as well as randomly selected faculty members, were included in the survey population. The instructors from technical institutes, community colleges, area vocational-technical schools, comprehensive high schools, and vocational centers totaled 3,431, from which a random sample of 346 was selected. In addition, businesses employing postsecondary vocational graduates were randomly selected. The 358 business and industry representatives were randomly selected from a total population of 5,069 employers who had hired graduates of postsecondary vocational-technical programs during the 1980-81 school year. The following table lists the numerical breakdown for each group.

Vocational-Technical Survey

Survey Population	Survey Sample	Survey Frames	Response Frequency	Response Percentage
11	11	State Board for Vocational Education	2	18
10	10	Community College Presidents	9	90
4	4	Technical Institute Presidents	3	75
26	26	Area Vocational School Superintendents	23	88
116	116	Comprehensive High School Principals	76	66
55	55	Vocational Center Principals	34	62
40	40	Coordinators of Instruction	33	83
95	95	Coordinators of Placement	62	65
3,431	346	Instructors	212	61
166	166	Advisory Council Chairpersons	62	37
5,069	358	Employers (Business and Industry)	108	34
9,023	1,185		624*	51

*Estimated sampling error ±3%

The Higher Education Survey

The higher education survey was designed to gather information from the various segments of the higher education community. In addition, the Tennessee General Assembly was surveyed to attempt to ascertain their perceptions of the current status of higher education. The areas surveyed included goals for higher educational in general, governance, instructional and institutional quality, student access, and funding. The groups selected to participate in the survey had a vested interest in public higher education in Tennessee.

All members of the Tennessee General Assembly, the Tennessee Higher Education Commission, the University of Tennessee Board of Trustees, the State Board of Regents, all college presidents or chancellors, vice-presidents or chancellors for academic affairs, deans of admissions and records, and deans of education were included in the survey. The 343 faculty representatives from the State University and Community College System were randomly selected from the total population of 3,289 by the Board of Regents research staff. From a total of 2,141 faculty members, the University of Tennessee System research staff randomly selected 323 members to participate in the higher education survey.

The topics included in the questionnaire were determined within the framework of the study design. The design of the survey instrument was enhanced by consultation with experts from the University of Tennessee, Knoxville, and Tennessee State University.

The College of Education faculty at George Peabody College For Teachers-Vanderbilt critiqued the questionnaire, and the Coordinating Committee reviewed and approved the survey instrument. A pretest was given at Belmont College prior to the distribution of the questionnaire. The following table graphically displays the numerical breakdown of the survey.

Higher Education Survey

Survey Population	Survey Sample	Survey Frames	Response Frequency	Response Percentage
122	122	General Assembly	15	12
8	8	THEC Members + Executive Director	6	75
15	15	UT Board Trustees + President	7	46
11	11	Board of Regents Members + Chancellor	5	45
23	23	College Presidents or Chancellors	20	89
23	23	Vice President or Chancellor for Academic Affairs	19	83
23	23	Deans of Admissions	19	83
9	9	Deans of Education	9	100
3,289	343	Board of Regents faculty	225	66
2,141	323	UT System faculty	210	65
5,664	900		535*	59

*Estimated sampling error ±4%

VIII CHAPTER ORGANIZATION

The Study is organized into eight chapters to display the information gathered and treated. The first three preliminary chapters, CHAPTER ONE--ORGANIZATIONAL PLAN OF THE STUDY; CHAPTER TWO--ECONOMIC AND FINANCIAL FORECAST; CHAPTER THREE--EDUCATIONAL LAW, provide direction and baseline information. The four subcommittee chapters, CHAPTER FOUR--KINDERGARTEN THROUGH GRADE TWELVE; CHAPTER FIVE--VOCATIONAL-TECHNICAL EDUCATION; CHAPTER SIX--HIGHER EDUCATION; CHAPTER SEVEN--PROFESSIONAL SCHOOLS, review defined components of public education in Tennessee. The last chapter, CHAPTER EIGHT--SUMMARY AND RECOMMENDATIONS, summarizes the findings of the Study.

CHAPTER TWO

ECONOMIC AND FINANCIAL FORECAST

I. INTRODUCTION

To provide baseline information for long-range planning, the Coordinating Committee of the Task Force approved a contractual arrangement authorizing an economic and financial forecast with implications for Tennessee public education. The areas identified by the Committee to be investigated were the economy, demographic information, manpower statistics, and financial information for the state. Memphis State University was the institution selected to perform the research, and the joint effort of various departments within the University was coordinated by the Vice President for Advancement.

II. THE TENNESSEE ECONOMY, 1982-1990*

A. Forecast Assumptions

Inflation

Inflation, as measured by the gross national product deflator, will be 8.7 percent in 1982, compared with 9.2 percent in 1981. Over the remainder of the decade, the inflation rate will fall slowly, with the rate being a little above 7.0 percent at the decade's end. On the average, the inflation rate is forecasted at 8.0 percent annually for the decade. This inflation forecast is based on the assumption that there will be no shocks in energy prices as occurred in 1973-74 and 1979-80.

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*Excerpted from William F. Fox, "State and National Outlook," An Economic Report to the Governor of the State of Tennessee, Tennessee State Planning Office, February 1982, 7-28.

Interest Rates

The forecast for a slow rebound from the current recession is based heavily on the anticipation of higher interest rates late in 1982. The expectation is that interest rates will rise again in the second half of the year as the government borrows to fund the deficit, people increase their demands for borrowed funds after the July 1, 1982 tax cut, and businesses increase their investment goals. Thus, rising interest rates will prohibit a swift rebound from occurring. The level of rates, however, will remain below the 1981 highs because the inflation component of interest rates will be smaller.

Declining inflation rates will eventually mean falling interest rates. Long-term interest rates should fall to near 10 percent by the decade's end, based on the inflation forecast. Falling interest will permit the pent-up demand for housing and automobiles to be satisfied in the 1983-85 time period. This will provide a strong stimulus to the state's economy.

Short-Term Forecast

The Tennessee economy is forecast to continue in a very stagnant condition during 1982. Tennessee's real gross state product (GSP) is forecast to grow only 0.4 percent during the year, which is slightly slower than the forecast for gross national product. By the end of 1982, constant dollar GSP will still be below the 1979 level.

The unemployment rate is forecast to continue rising and to average 8.9 percent for the year, exceeding the previous high of 8.5 percent recorded in 1981. The aggregate number of unemployed persons is expected to reach an all-time high in 1982; however, it must be remembered that the labor force will also be at an all-time high.

Personal income is forecast to grow slightly under 10.0 percent in 1982, amounting to less than 1.0 percent in constant dollars. In nominal dollars, income is forecast to increase less than any year since 1975. In large measure, this trend is caused by the very slow wage growth throughout 1982.

An upturn will begin slowly in the second half of 1982, but will not be reflected in the annual statistics until 1983. Output in Tennessee is forecast to grow just under 3.9 percent in 1983. This will be a strong year, but considerably under the 7.3 percent rebound that followed the 1974-75 recession.

Positive growth is expected in nonagricultural jobs in 1983, with the forecast calling for 2.4 percent growth. Although there will be almost 20,000 fewer jobs than in 1979, the unemployment rate is expected to fall rapidly through 1983 and will average 8.1 percent. The number of persons employed will increase so rapidly that the new entrants to the job market will be absorbed and the number of unemployed cut.

Sustained economic growth will continue into 1984 as the impacts of the tax cuts and declining interest rates stimulate further rebound from the recession. Nearly every economic sector will exhibit rapid growth in output and employment. The unemployment rate will drop dramatically to 7.3 percent as the economy experiences the best growth since 1978.

Long-Term Forecast

After 1984, a sound growth trend is generally forecast. A slowdown is reflected in 1986 and 1987 as an inventory adjustment and in recognition of the somewhat regular pattern of business cycles. Overall, the decade is forecast to be characterized by moderate growth.

The economic forecast for the next decade (1981-90) is for slower growth than in the past decade. Part of the reason is the very slow growth trend forecast for 1981 and 1982. The years 1983-90 are forecast to be closer to that of the past decade. It should also be noted that the U.S. GNP growth rate is expected to slow. Tennessee will continue to outperform the nation in economic growth over the next decade.

The unemployment rate is forecast to continue declining over the decade with slower growth in the labor force and healthy employment growth being the reasons. The unemployment rate will remain historically high, but this is not surprising in light of the expected mix of young people and women in the labor force.

B. Outlook For Selected Industries, 1982-1990*

Short-Term Forecast

In 1982, only slight improvements are expected, since the national and state economies are not expected to improve until the second half of the year. Manufacturing, mining, services, and finance, insurance, and real estate (FIRE) are expected to post modest gains in employment by year's end, while trade, services, FIRE, transportation, communications, and public utilities (TCPU), mining, and agriculture post modest gains in real gross product.

By 1983, growth is expected to be strong in all sectors, both in terms of output and employment. The construction sector, after four very poor years, will see real output increases around 9.0 percent and employment increases of 7.0 to 8.0 percent. Peak years of growth for most sectors during this expansion will occur in 1984; though the expected downswing in 1985 is expected to be mild and unlike most downswings, it will leave nearly every sector with modest gains.

Long-Term Forecast

Tennessee's basic economic strengths will continue to be an advantage for carrying out many kinds of activities. There is sufficient diversity in the state economy to maintain overall momentum. In every sector, employment and income should increase steadily, though at a slow pace around 1986.

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*Excerpted from R. Hofler, T. Mayo, P. Postma, and N. Schvening, "Outlook for Specific Industries," An Economic Report to the Governor of the State of Tennessee, Tennessee State Planning Office, February 1982, 29-83.

The trade and services sectors, after the cutbacks in the current recession, should respond to the decade's income and population growth and continue their long-term trend toward a larger portion of the state's gross product and employment. Employment in both sectors will grow between 2.0 and 3.0 percent per year in the last half of the decade, well above most other sectors. FIRE, after a downturn in 1985 and 1986, will make a strong rebound by 1987 in both employment and output. Above-average job growth in this sector will be sustained throughout the last half of the decade. The construction sector, following a small decline in 1986, will grow at annual rates of nearly 3.0 percent, although as noted, employment will not reach 1979 levels until 1989.

Sectors with slower overall growth rates over the long term include TCPU, government, and manufacturing. Though manufacturing is expected to gain large numbers of jobs each year of the forecast, growth rates appear low due to the large manufacturing base. This forecast is based on the assumption that there will be no legislative changes in taxes; thus, the forecast for growth in the government sector is constrained by the expected decline in real revenues under the present structure.

Manufacturing

Prudently stated, 1982 is not expected to be a banner year for output, employment, and wages in Tennessee manufacturing. Total manufacturing output is expected to stagnate, falling by 0.04 percent. Within the manufacturing sector, the output of durable goods should be affected most severely in 1982, falling 0.81 percent. Nondurable goods, however, should register positive but mild growth, 0.52 percent.

The manufacturing output, employment, and wages outlook for the 1983-85 period is expected to be significantly brighter than for 1982. Manufacturing output growth in the 1983-85 period will be led by rapid growth in the transportation equipment and lumber and wood products industries. Wage gains in manufacturing during the 1983-85 period should be sufficient to result in real wage increases. For this period real wage gains are forecast to peak at 2.23 percent in 1985.

Manufacturing output, employment, and wages are all forecast to grow at moderate rates for the 1986-90 period. Underlying this positive long-run outlook for manufacturing in Tennessee are several factors. Principal among these are higher-than-average productivity, above-average population growth, and adequate supplies of relatively low-cost factors of production.

Trade and Services

Despite the boost in 1982 that the eastern part of the state is expected to receive from the World's Fair--a boost that will benefit primarily trade and services--these two sectors, and the state's economy as a whole, will not see robust growth in 1982. In real terms, the trade sector's growth of 1.07 percent is the highest achieved by any output sector, except mining and agriculture. Retail sales should experience more than 3 percent real growth after adjusting for inflation. Despite the turnaround in trade output, trade employment will continue to decline slightly.

The services sector will likewise do better than most other sectors in 1982; nonetheless, its growth will be modest. Real output for services will be up 0.73 percent, more than total gross state product.

Through 1984, both trade and services will experience increasingly robust rates of growth. Responding to somewhat lower interest rates and higher employment and real income, retail sales should rebound to a peak growth rate of 4.59 percent in 1984, adjusted for inflation. By 1984, employment in the trade sector will surpass peak employment levels of the 1970s.

After the peak economic activity in 1984, growth in trade and services, along with other sectors, will slow in 1985 and reach a cyclical low during 1986. With employment growth of 1.54 and 1.45 percent, respectively, the trade and services sectors will sustain higher growth in the 1986 downturn than most other sectors, as they have traditionally.

Furthermore, beyond 1986, these two sectors are expected to grow at similar rates, with annual average employment growth between 2 and 3 percent. These rates, well above those for employment in manufacturing, government, transportation, communication, and public utilities, and, of course, agriculture, will be a continuation of the national and state secular trend, and make Tennessee's strength in these two sectors more similar to the United States economy. By 1990, trade will account for 22.4 percent of Tennessee employment, and services, 18.3 percent. This combined total of 40.7 compares to 38.5 percent in 1981 and 33.3 percent in 1970.

Finance, Insurance, and Real Estate

In general, the forecast for 1981-83 does not parallel the experience in 1973-76. However, adjusting for inflation by calculating GSP in 1972 dollars shows that the 1982 growth in real output will be approximately one-half of a percent. FIRE real output actually declined in 1981 (the state's real GSP rose) and will lag behind the state GSP in 1983. Thus, unlike the case in 1973-76, FIRE real output will lag behind Tennessee's recovery pace.

The period 1981-83 will find the total deposits of commercial banks rising by a sluggish 6.6 percent in the first year, 8.1 percent in the second year, and a more vigorous 10.6 percent in the third. These rates are each 1.5 to 2 percentage points higher than those in 1974-76, perhaps in part because of higher inflation rates.

Although FIRE real output will not parallel total activity in the short term and its growth rates will lag behind those of gross state product, the reverse will be true in the long term. Both real GSP and FIRE real output growth rates will decline from 1984 through 1986, rebound in 1987, and then stay at roughly their 1987 levels through 1990. The jump from 1986 to 1987 will be much larger in the FIRE sector than in the total. In contrast to 1981-83, the growth in FIRE's real output will be around 3.6 percent per year over 1984-90, while the GSP growth will average roughly 3.0 percent per year.

The simplest characterization of the long-term picture for commercial banks is that short-term trends will continue. Interest rates will decline significantly from 1983 to 1984, but then will drift slowly downward over the remainder of the decade. Real personal income will rise steadily, thus fostering increased demand for goods and services. Consequently, average annual deposit growth, which equalled 8.8 percent in 1974-76, and will reach 9.3 percent in 1981-83, will rise to approximately 10.2 percent in the long-term. Further, the loan-to-deposits ratio will continue to climb to around 70 percent by 1990.

Transportation, Communications, and Public Utilities

The TCPU sector is expected to recover somewhat slowly from the current downturn in 1982. Employment is forecast to continue declining, but at a slower rate, while nominal dollar output will rebound at a 12.07 percent annual rate. However, increases in output will not return to the long-run growth pattern until 1984. During the forecast period, employment is expected to grow at an annual compound rate of 1 percent -- one-third the rate achieved during the 1970s. Employment is not forecast to return to the 1979 peak of 87,300 until 1989.

During the 1980s, nominal output is forecast to grow somewhat slower than the long-term trend, but at a somewhat higher annual compound rate than the gross state product. This slowdown is primarily a result of slower anticipated growth of the state's economy during the next decade. The main unknown factor in this forecast is the long-run effect of deregulation on the transportation and communications sectors. Depending on price elasticities (normally considered relatively inelastic in these industries) deregulation could lead to a larger long-run expansion of output and employment than is forecast here.

Construction

The expected performance of both the Tennessee economy and interest rates is reflected in the forecasts for the years 1981-83. Not surprisingly, the recovery in the state's construction industry will wait until 1983 also. During 1983, real construction output will leap by 9.01 percent to a level of $865 million. Despite this growth, the 1983 level of output will still fall short of real construction output in 1971.

While the forecasts for output and employment contain gloomy elements, the expected performance of construction's real wages is encouraging. From 1981 through 1983, average construction real wages will exceed average wages for all the sectors.

The period 1984 through 1990 reflects the usual situation of construction output responding to both Tennessee overall economic activity and long-term interest rates. The combination of a precipitous decline in interest rates, peak growth in state economic activity, and pent-up demand for housing will induce a growth in construction output during 1984 of around 9.0 percent. Afterwards, output will follow the direction of Tennessee activity for two years and then rise to a range of growth rates around 3.7 percent per year in the final three years. Despite this healthy growth, it will be 1985 before real construction output will exceed the 1973 real output level.

Whereas the performance of construction employment will be mixed during 1984-90, real wages for this sector will move continually and strongly upward. The average construction employment growth rate will be over 2.3 percent for this period. Responding to those factors which will generate high output in 1984, employment will first grow at a vigorous 9.5 percent. Next the growth rate will fall until reaching negative rates (a decline in employment) in 1986, jump quickly to relatively high growth, and then level off at around 2.9 percent growth per year in the final two years. Total construction employment will not exceed the 1974 level of employment until 1988. In contrast to employment, the real wages of construction employees will stay higher than statewide average wages and will exhibit larger rates of growth in every year during 1984-90.

Government

Government sector nominal dollar output is expected to expand at an 11.1 percent annual compounded rate over the next nine years compared to an 11.6 percent annual compounded rate during the 1970s. When compared to the rapid advance of the last decade, government employment should grow very slowly during the 1980s, achieving only an 0.8 percent annual growth rate.

As in prior periods, the recession of 1980 triggered a need for state tax increases. In 1981, the General Assembly enacted a 2¢ increase in the gasoline tax and other increases for truck licensing. Tax revenues, which grew only 4.5 percent in nominal dollars between fiscal 1980 and 1981, are expected to increase 11 percent this year. Next year, however, the overall rate of increase should decline to 7 percent, if there are no new tax increases.

The anticipated slowdown in state and local tax collections may lead to layoffs and hiring freezes at the state and local levels during this year. In addition, TVA is considering shutting down construction of two reactor projects. This will lead to a loss of 4,000 government jobs during the 1982-85 period and an additional 500 jobs during 1986-90. If these additional layoffs occur during the decade, total government employment should decline through 1986 and not begin to grow again until 1987.

Because these projections assume no future tax increases at the state level and no expansion of local government taxing authority, the growth of total tax collections at the state and local levels is expected to be lower during the coming decade than during the last. Since inflation is expected to persist, although at lower rates, the real value of state and local tax dollars is forecast to decline. By 1990, each dollar of state tax revenues is expected to be worth 92¢ in purchasing power and each local dollar, 87¢. Without periodic tax increases in the coming decade, the size of the state-local government sector will shrink relative to the total economy. This will necessitate continuing expenditure adjustments, especially if the growth of intergovernmental assistance from the federal government is curtailed significantly over the long run.

Tables B-1, B-2, and B-3 in Appendix B graphically illustrate the status of per capita income in Tennessee.

III. DEMOGRAPHIC INFORMATION

The key determinant of school enrollment is the size and composition of the total population. School age persons constitute only a fraction of the total population and changes in school enrollments are generally a response to fluctuations in the total population. Therefore, to be able to project enrollments with any degree of accuracy, one must first generate a population projection of reasonable quality. In order to understand why enrollments are increasing/decreasing at differential rates over various sections of the state, information on population shifts and projected growth rates is required. In the following paragraphs, we briefly discuss statewide population shifts and projected growth rates which again are seen as underlying the school enrollment projections which follow.

The table on pages 31 and 32 shows population change, the components of change for Tennessee as a whole and each county separately for 1970 to 1978. Between 1970 and 1978 Tennessee's population grew 11.0 percent; that is, by 431,000 persons. Focusing only on net migration, nearly one-half of this growth, 5.3 percent, was due to a net influx of people into the state. Even if there had not been an excess of births over deaths, the state population would have still grown.

At county level, population growth is largely a product of net migration. The most rapidly growing counties (Williamson 46.6 percent, Cheatham 43.5 percent, and Sumner 38.6 percent) had 39.3 percent of this growth because of net migration (out of 46.6, 35.2, and 30.0 percent respectively). The same net migration impact was seen in the lowest growth counties (decline in two cases). Lake -11.5 percent, Gibson -0.2 percent, and Hancock 0.1 percent, showed net migration rates of -15.5, -2.3, and -2.2 percent, respectively. However, there are other counties which experienced larger percentage losses due to net out-migration than Gibson or Hancock, i.e., Davidson -4.9, Hardeman -3.3, and Shelby -3.2. The largest two counties, Davidson and Shelby, only sustained population growth due to the large excess of births over deaths.

The figure on page 33 provides a map of the state by county and metropolitan area. The darkened boundaries, in conjunction with the numerical identifiers, distinguish metropolitan from nonmetropolitan counties. If one looks at the map and the estimates of county populations, an interesting pattern with respect to migration rates emerges. Counties experiencing the greatest percentage population loss due to net out-migration are either central counties of metropolitan areas, for example, Davidson and Shelby, or isolated nonmetropolitan counties, for example, Gibson and Lake.

On the other hand, counties showing the largest percentage population increase due to net in-migration are concentrated in metropolitan areas and frequently are contiguous to metropolitan central counties showing migration losses (for example, Cheatham, Sumner, and Wilson are contiguous to Davidson), or contiguous to metropolitan areas (for example, Macon and Stewart).

The table on page 34 shows the median age, i.e., age at which the population is divided into equal halves, for each county for 1970 and 1980. In general, median ages have increased for these counties. This trend is consistent with the median age increase for the state and the nation as a whole. Looking again at the map on page 33 a pattern of age distribution can be gleaned. Counties with the oldest populations tend to be isolated and nonmetropolitan, for example, Benton, Carroll, and Gibson. Conversely, counties with the youngest age distributions are concentrated in metropolitan or are contiguous to metropolitan counties, for example, Fayette, Montgomery, Rutherford, and Scott.

Population projections by age category for the state and individual counties to the year 1990 are available from the Tennessee Department of Public Health; 1980-90 growth rates derived from these more detailed tables appear on pages 35 and 36. Again, the metropolitan, contiguous to metropolitan, and nonmetropolitan distinction is important. With the exception of Cumberland County, the counties projected to grow the fastest are metropolitan (Cheatham, Sumner, and Williams--all part of the Nashville-Davidson metropolitan area). With one exception, Hancock, the counties projected to experience population loss are isolated nonmetropolitan counties, Gibson, Hardeman, and Lake.

In sum, data from the preceding three tables indicate: (1) metropolitan and contiguous to metropolitan counties exhibited the largest gains in population during the 1970s and are projected to grow the fastest during the 1980s; (2) nonmetropolitan counties, particularly isolated counties, experienced the lowest growth rates during the 1970s and are projected to continue this pattern during the 1980s; and (3) growth rates are particularly sensitive to varying levels of net migration. In addition, regional distinctions with respect to 1970s and projected 1980s growth can be made. In general, the western portion of the state grew slowly in the 1970s and is projected to continue growing slowly in the 1980s. However, the central and eastern portions of the state grew more rapidly in the 1970s and are projected to continue this pattern in the 1980s. Nevertheless, the sensitivity of population growth rates and sensitivity to migration rate fluctuation lead us to our only caveat concerning this brief demographic description. Given unforeseen changes in the state's economy or industrial structure, which in turn would affect migration rates, these projections may prove to be incorrect. Year-to-year population fluctuations, particularly those related to plant closings and other shifts in employment opportunities, should be monitored carefully in order that the requisite changes for future population projections be made.

School enrollment projections are presented for K-12, Vocational-Technical, and Higher Education in the tables found on pages 37, 38, and 39 respectively.

Estimates of the Population of Tennessee Counties: July 1, 1970 and 1978

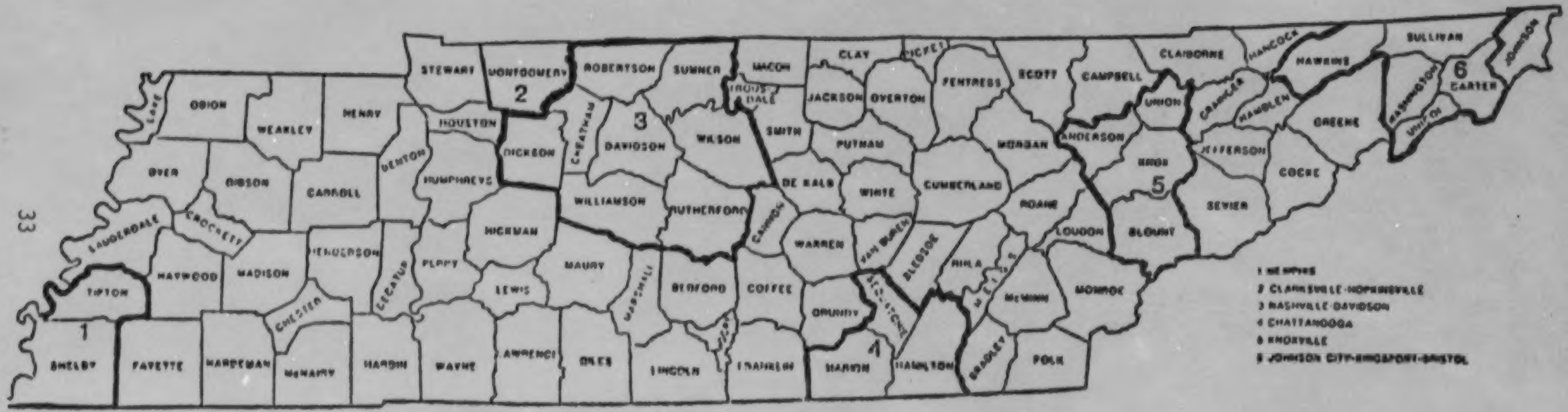
COUNTY	JULY 1, 1978	APRIL 1, 1970 (CENSUS)	CHANGE, 1970 TO 1978		COMPONENTS OF CHANGE 1970 TO 1978[1]			
							NET MIGRATION	
			NUMBER	PERCENT	BIRTHS	DEATHS	NUMBER	PERCENT
TENNESSEE.....	4,357,000	3,926,018	431,000	11.0	544,000	321,000	208,000	5.3
ANDERSON......	65,900	60,300	5,600	9.3	7,300	4,100	2,400	4.0
BEDFORD.......	26,800	25,039	1,800	7.1	3,500	2,400	700	3.0
BENTON........	13,400	12,126	1,200	10.2	1,500	1,400	1,200	9.6
BLEDSOE.......	8,500	7,643	900	11.6	1,000	700	500	7.2
BLOUNT........	75,500	63,744	11,800	18.5	7,800	4,800	8,900	13.9
BRADLEY.......	62,800	50,686	12,100	23.9	8,500	3,500	7,200	14.2
CAMPBELL......	32,100	26,045	6,000	23.1	4,200	2,600	4,500	17.1
CANNON........	9,400	8,467	900	11.2	1,100	900	700	8.8
CARROLL.......	27,400	25,741	1,700	6.4	3,100	2,600	1,100	4.5
CARTER........	47,600	43,259	4,300	10.0	5,400	3,400	2,300	5.3
CHEATHAM......	16,900	13,199	5,700	43.5	2,100	1,100	4,600	35.2
CHESTER.......	12,100	9,927	2,200	21.8	1,200	900	1,900	18.8
CLAIBORNE.....	26,400	19,420	6,900	35.7	2,800	1,900	6,100	31.2
CLAY..........	6,900	6,624	300	4.2	700	600	200	2.4
COCKE.........	28,500	25,283	3,200	12.7	3,800	2,400	1,800	7.0
COFFEE........	35,300	32,572	2,700	8.4	4,200	2,500	1,100	3.2
CROCKETT......	14,600	14,402	200	1.1	1,700	1,400	-100	-0.7
CUMBERLAND....	27,200	20,733	6,500	31.2	3,100	1,800	5,200	24.9
DAVIDSON......	451,200	447,877	3,300	0.7	58,500	33,200	-22,000	- 4.9
DECATUR.......	10,000	9,457	500	5.4	1,100	1,000	400	3.7
DE KALB.......	12,800	11,151	1,700	14.9	1,500	1,100	1,300	11.8
DICKSON.......	28,300	21,977	6,300	28.7	3,300	2,100	5,100	23.3
DYER..........	33,800	30,427	3,400	11.0	4,200	3,100	2,200	7.4
FAYETTE.......	25,000	22,692	2,300	10.0	3,500	1,700	400	1.7
FENTRESS......	14,600	12,593	2,000	16.1	1,900	1,100	1,200	9.7
FRANKLIN......	30,400	27,289	3,100	11.4	3,700	2,400	1,800	6.5
GIBSON........	47,800	47,871	-100	-0.2	5,800	4,800	-1,100	-2.3
GILES.........	23,400	22,138	1,300	5.8	2,700	2,200	800	3.5
GRAINGER......	16,900	13,948	3,000	21.3	1,900	1,100	2,200	15.7
GREENE........	52,100	47,630	4,500	9.5	6,100	3,800	2,200	4.7
GRUNDY........	12,400	10,631	1,800	16.7	2,000	1,100	900	8.2
HAMBLEN.......	45,100	38,696	6,400	16.4	6,100	2,900	3,200	8.1
HAMILTON......	269,600	255,077	14,500	5.7	36,200	21,200	-500	-0.2
HANCOCK.......	6,700	6,719	(Z)	0.1	800	600	-100	-2.2
HARDEMAN......	23,100	22,435	700	3.1	3,300	1,900	-700	-3.3
HARDIN........	20,900	18,212	2,700	15.0	2,400	1,700	2,000	11.1
HAWKINS.......	39,300	33,757	5,600	16.6	4,700	2,700	3,600	10.6
HAYWOOD.......	21,600	19,596	2,000	10.2	2,800	1,700	1,000	5.0
HENDERSON.....	20,000	17,360	2,600	15.1	2,500	1,600	1,900	11.2
HENRY.........	26,400	23,749	2,700	11.2	2,800	2,800	2,700	11.2
HICKMAN.......	14,200	12,096	2,100	17.3	1,400	1,100	1,600	14.7
HOUSTON.......	6,700	5,853	800	14.2	800	600	600	10.0
HUMPHREYS.....	15,200	13,560	1,700	12.4	1,900	1,200	1,000	7.4
JACKSON.......	8,800	8,141	600	7.5	900	900	600	7.1
JEFFERSON.....	29,300	24,940	4,400	17.5	3,100	1,900	3,200	12.8
JOHNSON.......	13,900	11,569	2,300	19.9	1,700	900	1,600	13.4
KNOX..........	302,400	276,293	26,100	9.4	33,300	21,500	14,300	5.2
LAKE..........	7,100	8,074	-900	-11.5	1,200	800	-1,300	-15.5
LAUDERDALE....	23,100	20,271	2,800	13.8	3,000	2,100	2,000	9.7
LAWRENCE ...	33.900	29.097	4,800	16.5	4,000	2,500	3,300	11.3

COUNTY	JULY 1, 1978	April 1, 1970 (CENSUS)	CHANGE, 1970 TO 1978		COMPONENTS OF CHANGE 1970 TO 1978[1]			
			NUMBER	PERCENT	BIRTHS	DEATHS	NET MIGRATION	
							NUMBER	PERCENT
LEWIS..........	8,700	6,761	2,000	29.2	1,400	700	1,200	17.8
LINCOLN.......	25,300	24,318	1,000	4.0	3,100	2,300	200	1.0
LOUDON........	27,300	24,266	3,000	12.4	3,100	2,200	2,200	9.0
McMINN........	39,700	35,462	4,200	11.9	4,800	3,000	2,400	6.6
McNAIRY.......	21,600	18,369	3,200	17.7	2,400	1,900	2,700	14.7
MACON.........	15,000	12,315	2,700	21.6	1,500	1,300	2,500	20.2
MADISON.......	71,300	65,774	5,500	8.4	9,200	6,200	2,500	3.8
MARION........	23,400	20,577	2,800	13.8	3,100	1,900	1,600	7.8
MARSHALL......	18,300	17,319	1,000	5.8	2,100	1,800	700	3.8
MAURY.........	48,300	44,028	4,300	9.8	5,600	4,100	2,800	6.3
MEIGS.........	7,000	5,219	1,800	34.9	900	400	1,400	26.2
MONROE........	27,200	23,475	3,800	16.0	3,500	2,000	2,200	9.5
MONTGOMERY....	80,100	62,721	17,400	27.7	11,500	4,000	9,900	15.7
MOORE.........	4,000	3,568	500	13.4	400	300	400	10.7
MORGAN........	15,900	13,619	2,300	17.1	2,000	1,200	1,500	11.2
OBION.........	34,000	30,247	3,700	12.3	4,000	3,200	2,900	9.6
OVERTON.......	17,200	14,866	2,300	15.7	2,000	1,400	1,800	11.9
PERRY.........	6,200	5,238	900	17.9	600	600	900	17.6
PICKETT.......	4,400	3,774	600	16.8	500	300	500	12.7
POLK..........	13,200	11,669	1,500	13.0	1,900	1,000	700	6.0
PUTNAM........	41,900	35,487	6,400	18.1	4,400	2,800	4,800	13.6
RHEA..........	22,700	17,202	5,500	32.0	2,900	1,600	4,200	24.4
ROANE.........	44,700	38,881	5,800	14.9	5,000	3,200	3,900	10.1
ROBERTSON.....	32,900	29,102	3,800	13.2	4,000	2,800	2,600	9.0
RUTHERFORD....	76,500	59,428	17,100	28.8	9,100	4,200	12,200	20.5
SCOTT.........	17,800	14,762	3,100	20.8	2,700	1,400	1,800	12.0
SEQUATCHIE....	7,700	6,331	1,400	22.4	1,000	500	900	14.2
SEVIER........	37,000	28,241	8,700	30.9	4,000	2,200	7,000	24.8
SHELBY........	754,500	722,111	32,400	4.5	108,000	53,900	-21,700	-3.0
SMITH.........	14,100	12,509	1.600	13.0	1,400	1,200	1,400	11.2
STEWART.......	9,300	7,319	2,000	26.8	800	700	1,900	25.5
SULLIVAN......	138,500	127,329	11,200	8.8	16,700	8,900	3,400	2.7
SUMNER........	78,000	56,266	21,700	38.6	9,200	4,300	16,900	30.0
TIPTON........	32,100	28,001	4,100	14.5	4,400	2,500	2,200	7.7
TROUSDALE.....	5,600	5,155	400	8.6	600	500	300	6.6
UNICOI........	15,700	15,254	400	2.8	1,900	1,300	-100	-0.6
UNION.........	11,900	9,072	2,800	31.1	1,300	700	2,200	24.5
VAN BUREN.....	4,300	3,758	600	14.6	500	300	300	9.2
WARREN........	31,300	26,972	4,400	16.2	3,700	2,300	2,900	10.7
WASHINGTON....	83,000	73,924	9,100	12.3	9,600	6,200	5,600	7.6
WAYNE.........	13,500	12,365	1,200	9.4	1,700	1,000	500	3.9
WEAKLEY.......	30,900	28,827	2,100	7.1	3,000	2,900	1,900	6.5
WHITE.........	19,700	16,329	3,400	20.9	2,100	1,600	2,900	17.7
WILLIAMSON....	50,500	34,423	16,000	46.6	5,100	2,600	13,500	39.3
WILSON........	49,600	36,999	12,600	34.2	5,600	3,100	10,100	27.3

Z Less than 50 persons or less than 0.05 percent.

[1] Births and Deaths are based on reported vital statistics from April 1, 1970 to December 31, 1977, with extrapolations to June 30, 1978. Net migration is the difference between net change and natural increase.

TENNESSE COUNTIES AND METROPOLITAN AREAS: 1980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SEVIER
BLOUNT
LOUDON
MONROE
POLK
MCMINN
MEIGS
RHEA
BRADLEY
HAMILTON
MARION
GRUNDY
SEQUATCHIE
BLEDSOE
VAN BUREN
WARREN
WHITE
CUMBERLAND
ROANE
MORGAN
OVERTON
JACKSON
PUTNAM
TROUSDALE
SMITH
DE KALB
CANNON
COFFEE
FRANKLIN
MOORE
LINCOLN
BEDFORD
MARSHALL
GILES
LAWRENCE
MAURY
RUTHERFORD
WILSON
DAVIDSON
CHEATHAM
WILLIAMSON
DICKSON
HOUSTON
HUMPHREYS
HICKMAN
LEWIS
PERRY
WAYNE
HARDIN
DECATUR
BENTON
CARROLL
HENDERSON
CHESTER
MCNAIRY
HARDEMAN
MADISON
CROCKETT
GIBSON
DYER
LAUDERDALE
HAYWOOD
TIPTON
FAYETTE
SHELBY
1 MEMPHIS
2 CLARKSVILLE-HOPKINSVILLE
3 NASHVILLE-DAVIDSON
4 CHATTANOOGA
5 KNOXVILLE
6 JOHNSON CITY-KINGSPORT-BRISTOL

Median Age for Tennessee Counties: 1970 and 1980

	MEDIAN AGE 1980	MEDIAN AGE 1970		MEDIAN AGE 1980	MEDIAN AGE 1970
ANDERSON	32.5	29.3	LEWIS	29.3	30.1
BEDFORD	32.8	31.1	LINCOLN	33.7	31.6
BENTON	34.8	33.5	LOUDON	33.2	31.5
BLEDSOE	28.0	26.6	MCMINN	31.4	29.3
BLOUNT	31.8	29.5	MCNAIRY	33.4	32.4
BRADLEY	28.8	26.5	MACON	32.2	34.0
CAMPBELL	31.2	30.4	MADISON	29.7	28.7
CANNON	33.1	32.8	MARION	30.3	26.9
CARROLL	33.8	33.4	MARSHALL	33.7	33.4
CARTER	32.0	29.5	MAURY	31.5	29.9
CHEATHAM	29.0	27.8	MEIGS	30.1	27.5
CHESTER	28.7	29.3	MONROE	30.4	27.8
CLAIBORNE	29.7	29.0	MONTGOMERY	25.8	23.3
CLAY	32.9	31.5	MOORE	31.6	33.1
COCKE	30.8	27.4	MORGAN	29.6	27.5
COFFEE	31.8	28.8	OBION	32.4	33.1
CROCKETT	32.7	31.2	OVERTON	32.5	30.6
CUMBERLAND	31.3	27.9	PERRY	34.1	37.3
DAVIDSON	30.0	27.8	PICKETT	32.9	32.3
DEACATUR	34.7	33.9	POLK	30.9	29.0
DEKALB	33.0	33.2	PUTNAM	28.5	26.5
DICKSON	31.2	29.9	RHEA	29.3	27.6
DYER	31.4	30.8	ROANE	32.1	29.6
FAYETTE	27.3	21.1	ROBERTSON	30.4	30.6
FENTRESS	30.2	27.0	RUTHERFORD	27.3	25.2
FRANKLIN	30.8	28.3	SCOTT	27.7	26.3
GIBSON	33.8	32.4	SEQUATCHIE	29.5	26.9
GILES	33.2	33.1	SEIVER	31.4	29.5
GRAINGER	30.7	28.2	SHELBY	28.0	25.4
GREENE	32.3	29.2	SMITH	32.7	33.4
GRUNDY	28.7	28.0	STEWART	35.1	35.0
HAMBLEN	30.7	27.7	SULLIVAN	32.5	28.8
HAMILTON	30.5	29.2	SUMNER	29.6	27.9
HANCOCK	31.6	29.7	TIPTON	28.4	25.1
HARDEMAN	29.9	29.6	TROUSDALE	31.8	33.1
HARDIN	32.4	31.0	UNICOI	33.7	30.8
HAWKINS	31.1	28.7	UNION	29.6	27.5
HAYWOOD	28.3	25.1	VAN BUREN	29.7	28.5
HENDERSON	31.8	31.7	WARREN	31.4	29.3
HENRY	35.0	35.9	WASHINGTON	30.4	28.8
HICKMAN	31.0	31.8	WAYNE	30.7	28.4
HOUSTON	32.5	31.4	WEAKLEY	30.2	30.4
HUMPHREYS	31.6	30.1	WHITE	33.1	31.2
JACKSON	33.7	34.1	WILLIAMSON	30.8	28.7
JEFFERSON	31.1	27.8	WILSON	30.7	29.2
JOHNSON	32.1	30.5			
KNOX	30.0	28.4	TENNESSEE	30.1	28.1
LAKE	31.9	27.0			
LAUDERDALE	30.1	29.2			
LAWRENCE	31.2	30.0			

SOURCE: Population estimates for the state of Tennessee, provided by Tennessee Department of Public Health State Center for Health Statistics.

Population Growth Rates for TN Counties: 1980 - 1990

	Growth Rate		Growth Rate
Anderson	6.7	Humphreys	15.5
Bedford	6.1	Jackson	3.3
Benton	4.7	Jefferson	14.7
Bledsoe	32.3	Johnson	19.2
Blount	18.0	Knox	13.9
Bradley	27.7	Lake	-8.6
Campbell	19.1	Lauderdale	21.8
Cannon	17.8	Lawrence	20.1
Carroll	9.5	Lewis	22.2
Carter	10.3	Lincoln	11.7
Cheatham	51.6	Loudon	15.6
Chester	23.2	McMinn	24.9
Claiborne	32.5	McNairy	16.3
Clay	-.2	Macon	15.6
Cocke	16.5	Madison	16.7
Coffee	9.0	Marion	16.6
Crockett	1.7	Marshall	12.7
Cumberland	36.1	Maury	9.2
Davidson	5.0	Meigs	17.8
Decatur	6.4	Monroe	12.5
Dekalb	18.5	Montgomery	14.0
Dickson	33.9	Moore	6.0
Dyer	12.7	Morgan	17.1
Fayette	22.8	Obion	12.1
Fentress	23.7	Overton	8.4
Franklin	12.5	Perry	17.7
Gibson	-1.0	Pickett	19.1
Giles	2.8	Polk	11.2
Grainger	19.2	Putnum	24.3
Greene	10.7	Rhea	32.4
Grundy	34.1	Roane	12.0
Hamblen	22.1	Robertson	20.7
Hamilton	7.0	Rutherford	28.5
Hancock	-2.1	Scott	14.5
Hardeman	-10.3	Sequatchie	17.7
Hardin	15.1	Sevier	26.9
Hawkins	13.8	Shelby	9.2
Haywood	17.8	Smith	13.8
Henderson	18.3	Stewart	27.3
Henry	11.5	Sullivan	5.7
Hickman	13.6	Sumner	39.1
Houston	16.8	Tipton	19.4

	Growth Rate		Growth Rate
Trousdale	15.2	Wayne	10.5
Unicoi	11.5	Weakley	8.9
Union	14.9	White	16.6
Van Buren	26.6	Williamson	68.5
Warren	20.6	Wilson	33.1
Washington	21.0	Tennessee	14.3

SOURCE: Population estimates for the state of Tennessee, provided by Tennessee Department of Public Health State Center for Health Statistics.

PUBLIC SCHOOL SYSTEM OF TENNESSEE
K-12 ENROLLMENT
1962-1981 AND ANNUAL PROJECTIONS, 1982-1990

Scholastic Year Ending June 30 of:		K-12 Enrollment
1962	Actual	847,852
1963		864,336
1964		884,785
1965		893,998
1966		899,571
1967		902,227
1968		906,937
1969		914,542
1970		916,862
1971		937,471
1972		936,047
1973		925,181 [a]
1974		914,867
1975		913,103
1976		918,684
1977		950,855
1978		918,552
1979		911,347
1980		898,997
1981		889,847
1982	Projected	874,006
1983		865,229
1984		860,886
1985		860,408
1986		862,787
1987		865,287
1988		866,735
1989		867,763
1990		869,701
1991		872,839

[a] The 1973 data point was suppressed from the trend fitting process on the basis of abnormal influence occurring during the year, i.e., drop in enrollments due to implementation of school busing plans in the state's larger metropolitan areas. Conversations with Memphis City School System representatives indicate that while budget officials tended to initially over-react to drops in enrollment and revenues, changes to the funding formula and adjustments in the budgeting process brought the services delivered on a per-student basis in line with the trends established in the pre-busing periods.

SOURCE: Bureau of Educational Research and Services
Memphis State University

TOTAL STATE-WIDE VOC-TECHNICAL EDUCATION ENROLLMENT
1969-1981 AND ANNUAL PROJECTIONS, 1982-1990

Scholastic Year Ending June 30 of:		Total State-Wide
1969	Actual	137,150
1970		136,360
1971		142,297
1972		150,471
1973		160,482
1974		173,205
1975		188,986
1976		205,283
1977		248,702
1978		284,100
1979		270,786
1980		310,517
1981		309,014
1982	Projected	300,359
1983		297,093
1984		302,440
1985		309,883
1986		319,833
1987		325,279
1988		327,921
1989		326,428
1990		324,613
1991		324,847

SOURCE: Technical Institute Enrollment provided by Tennessee Higher Education Commission. All other voc-tech enrollment projections provided by the Vocational - Technical Education Division, Tennessee Department of Education.

HIGHER EDUCATION ENROLLMENT 1961-1981 AND PROJECTIONS 1982-1990

	Scholastic Year Ending June 30 of:	Total State-Wide	SBR/UT Systems	Technical Institutes
Actual	1961	35,332	35,332	-
	1962	40,244	40,244	-
	1963	42,535	42,535	-
	1964	46,547	46,547	-
	1965	55,447	55,447	-
	1966	63,000	63,000	-
	1967	69,244	68,627	617
	1968	75,806	74,990	816
	1969	82,604	80,443	2,161
	1970	91,106	88,791	2,315
	1971	98,464	95,217	3,247
	1972	104,526	101,183	3,343
	1973	111,743	106,356	5,387
	1974	118,028	113,186	4,842
	1975	125,726	119,451	6,275
	1976	139,528	132,590	6,938
	1977	140,544	132,446	8,098
	1978	146,309	135,879	10,430
	1979	150,109	138,255	11,854
	1980	154,503	140,612	13,891
	1981	157,312	141,705	15,607
Projected Series A Current Admission Policies	1982	153,460	137,092	16,368
	1983	156,246	139,246	17,000
	1984	158,086	140,086	18,000
	1985	160,310	141,310	19,000
	1986	162,010	142,010	20,000
	1987	161,010	140,410	20,600
	1988	161,810	140,310	21,500
	1989	161,710	139,610	22,100
	1990	161,710	139,210	22,500
	1991	160,910	137,810	23,100
Projected Series B Elevated Admission Policies	1982	153,460	137,092	16,368
	1983	152,197	135,797	16,400
	1984	149,788	133,388	16,400
	1985	147,695	131,295	16,400
	1986	144,778	128,378	16,400
	1987	143,030	126,630	16,400
	1988	142,362	125,962	16,400
	1989	141,462	125,062	16,400
	1990	141,062	124,662	16,400
	1991	139,562	123,162	16,400

SOURCE: Tennessee Higher Education Commission

IV. MANPOWER STATISTICS

Improving the delivery of educational and training services is an essential first step in the process of improving the economic status of people in Tennessee. The process involves investing in basic education and training in order to develop a trainable productive labor force that can meet the labor needs of modern industries. By being prepared to take advantage of the employment opportunities generated by technological and structural changes in the labor market, citizens will realize an increase in income and economic opportunities available in Tennessee.

The process involves continuously balancing the quantity and quality of basic education and skill training provided by the educational system and the quantity and quality of job opportunities available in the labor market. Clearly, the dynamic nature of job opportunities makes it essential that the process of continuous revision be an integral component of the educational and training system.

The table on page 44 contains data on the occupational composition of the state based on data published by the Tennessee Department of Employment Security in Tennessee Employment Outlook: Industries and Occupations Statewide 1974-85. These projections are based on assumptions about the economy, projections of employment by industry, and industry/occupation employment profiles; for example, industry employment estimates are developed and used in conjunction with an industry/occupation employment matrix to develop employment estimates by occupation. To the extent that the assumptions about the economy are in error or that changes occur in the structure of the industry/occupation employment matrix, the subsequent occupational projections will be inaccurate.

It should be noted that the Tennessee Department of Employment Security is in the process of revising its projections. Occupational projections through 1990 should be available in the winter of 1982. In the absence of these updated figures, simple linear projections of the 1985 figures were used to estimate 1990 employment by occupation. As a result, the data in the tables on pages 44 and 45 conceal changing economic conditions and structures within industries and occupations. The data are simply useful for making specific program recommendations. While more detailed 1974-85 industry and occupation projections are available from the Tennessee Department of Employment Security, inaccuracies in the assumptions behind the projections and the industry/occupation matrix continue to limit the usefulness of the data (U.T. Center for Business and Economic Research, 1981, 7-24).

National and international economic conditions and policies will have a substantial and unknown impact on the economy of Tennessee. Trade restrictions, interest rates, oil prices, wars, international economic conditions, multinational corporation policies, and other factors will influence the growth of employment and income opportunities in Tennessee. High domestic interest rates, unemployment rates, inflation, energy prices, transportation costs, wage gains, and other factors will influence the relative economic well-being of the people in Tennessee. These factors will influence plant location decisions, new construction and expansion plans, the nature and rate of capital accumulation, and ultimately the magnitude and composition of increases in employment opportunities and training needs in the 1980s (Hofler, et al, 1982, 21-30).

In all cases pressure on the existing educational and training system will result in increases in the demand for a larger, better trained work force.

Increasing the flexibility and responsiveness of the existing system will meet many of the marginal firms' specific demands placed on the system. More general policy changes, however, should be based on a thorough analysis of the changing industrial and occupational structure of the economy. Clearly, the data in the following tables only provide general insight into the continuing evolution of the industrial and occupational structure of Tennessee.

The tables on pages 44 and 45 show the continued growth and expansion of employment and income opportunities that are expected in Tennessee. The historical tendency to move away from an agriculturally oriented economy toward a manufacturing and ultimately service based economy will most likely continue to occur in Tennessee (Miernyk, 1977, 35-64). Employment opportunities in white-collar nonmanufacturing jobs, particularly in the service sector, will continue to expand faster than in most other areas.

The table on page 46 is a listing of the fastest growing jobs in the United States for the period 1987-90. Also shown are the entry level education requirements for each occupation. Of the twenty-six occupations listed, eighteen do not require a college degree for entry level employees. Eleven occupations require a high school diploma or less. It must be emphasized that these are fast growing occupations, not necessarily high demand occupations. Before a decision is made to substitute one of the occupations shown for an existing program, supply and demand data should be reviewed to ensure that demand is great enough and the supply short enough to justify the expenditure of funds for a training program.

The growth of employment opportunities projected in other industries and occupations will depend on many factors, such as interest rates for the construction industry, transportation and energy costs and prices for the transportation and public utility industry, coal prices and organization opportunities in the mining industry, and agricultural prices and costs for the agriculture industry. Structural and technological changes will also have a major impact in the demand for labor by the end of the 1980s. For example, while employment in agriculture may stabilize during this decade, the sophistication of training required to obtain and maintain a job will continue to increase. In other industries, the magnitude and pace of developments in the computer industries will influence the nature of employment opportunities for nearly all workers. The development of computerized information and industrial processes will permeate both high and low technology industries in the 1980s and will influence the education and training required from the educational system in Tennessee.

Without quantitative data to use as a guide, it is difficult to estimate the ultimate impact of continued economic growth and increasingly rapid technological changes on the educational system. Clearly, increasing the quantity and quality of education and training will be important to the economic development of the state. Upgrading existing programs and modifying the mix of services to reflect changing economic opportunities will be an essential ingredient in any program to improve economic well-being of all residents of Tennessee.

Occupational Employment in Tennessee, 1974 - 1990

		Employment		Annual Change in 1974-90
	1974	1985	1990	Number
Total	1,758,640	2,120,100	2,284,400	32,860
Professional, Technical & Kindred	207,490	263,370	288,770	5,080
Managers, Officials & Proprietors	174,430	212,160	229,310	3,430
Sales Workers	116,160	123,760	131,760	1,600
Clerical Workers	258,950	339,800	376,550	7,350
Craftsmen, Foremen & Kindred	253,530	320,080	350,330	6,050
Operatives	386,480	469,750	507,600	7,570
Service Workers	209,290	243,280	258,730	3,090
Laborers, except Farm	97,980	107,440	111,740	860
Farmers and Workers	64,330	40,460	29,610	-2,170

NOTE: Other employment projections are available for the time periods 1970-80 and 1976-82 from the Tennessee Department of Employment Security. Growth rates for major occupational categories vary substantially among the three sets of projections. The 1974-85 projections tended to be the least optimistic and therefore may understate employment changes projected for other time periods.

SOURCE: Tennessee Employment Outlook Industries and Occupations - Statewide 1974-85, Tennessee Department of Employment Security, February 1977.

Projected Employment by Industry in Tennessee, 1974 - 1990

	Employment Projections			Change 1974-85		Change 1974-1990	
	1974	1985	1990	Number	Percent	Number	Percent
Total All Industries	1,758,790	2,120,140	2,284,390	361,350	21	525,600	30
Agriculture, Forestry, Fisheries	73,930	50,890	40,372	-23,040	-31	- 33,558	-45
Mining	8,490	10,390	11,254	1,900	22	2,764	33
Construction	132,640	169,050	185,600	36,410	27	52,960	40
Manufacturing	520,940	647,190	704,576	126,250	24	183,636	35
Durable Goods	233,500	301,950	333,064	68,450	29	99,564	43
Nondurable Goods	287,440	345,240	371,513	57,800	20	84,073	30
Transportation, other public utilities	99,590	110,510	115,474	10,920	11	15,884	16
Wholesale & Retail Trade	354,440	406,200	429,727	51,760	15	75,287	21
Wholesale Trade	91,090	105,570	112,152	14,480	16	21,062	23
Retail Trade	263,350	300,630	317,576	37,280	14	54,226	21
Finance Insurance, Real Estate	73,400	90,580	98,389	17,180	23	24,989	34
Services	429,000	552,600	608,782	123,600	29	179,782	42
Government	66,360	82,730	90,171	16,370	25	23,811	36

NOTE: Other employment projections are available for the time periods 1970-80 and 1976-82 from the Tennessee Department of Employment Security. Growth rates for major occupational categories vary substantially among the three sets of projections. The 1974-85 projections tended to be the least optimistic and therefore may understate employment changes projected for other time periods.

SOURCE: Tennessee Employment Outlook Industries and Occupations - Statewide 1974-85, Tennessee Department of Employment Security, February 1977.

FASTEST GROWING JOBS IN THE UNITED STATES
1978-1990

Occupation	Required Education
Bank clerks	HS dip and VocEd
Bank officers and fin. managers	Coll grad and master's
Business machine repairers	HS dip and VocEd
City managers	Coll grad and master's
Computer service technicians	Jr Coll and VocEd
Construction inspectors	HS dip and VocEd and OJT
Dental assistants	Jr coll and OJT
Dental hygienists	Lic and Jr coll or coll grad
Dining room attendants and dishwashers	None
Flight attendants	HS dip and VocEd and OJT
Guards	HS dip and OJT
Health service administrators	coll grad and master's
Homemaker-home health aides	None and VocEd and OJT
Industrial machine repairers	HS dip and VocEd
Landscape architects	Coll grad
Lic practical nurses	lic and VocEd
Lithographers	HS dip and OJT
Nurses aides, orderlies and attendants	HS grad and OJT
Occupational therapists	Coll grad
Occupational therapy assistants	Jr coll and VocEd
Physical therapists	Lic and coll grad
Podiatrists	Coll grad and doctorate
Respiratory therapy workers	Jr coll and VocEd or coll grad
Speech pathologists and audiologists	Coll grad and master's
Teachers aides	HS dip
Travel agents	OJT

SOURCE: Occupational Outlook Handbook, 1980-81 Edition. U.S. Department of Labor, Bureau of Labor Statistics, 1980. And the Job Outlook in Brief, Occupational Outlook Quarterly (Spring 1980).

NOTES: For these occupations, employment is projected to be at least 50 percent higher than it was in 1978. The required education is the education required for the majority of entry level workers. OJT means on-the-job training and HS Dip means High School Diploma or equivalent. The first entry in the required education column is usually the required formal education. After that is listed any additional educational background usually required.

V. FINANCIAL INFORMATION

A. Introduction

One consideration of the Tennessee Comprehensive Education Study was to review historical and projected funding levels for kindergarten through graduate and professional schools. Because of differences in the nature of the various educational programs and the varying sources of the required historical statistics, the categories K-12, vocational-technical education, higher education, and the four technical institutes were maintained separately both in the projection process and the tabular presentation of the resulting projections. Since the state's four technical institutes fall under separate funding and administrative boards, financial statistics for these four technical institutes have been included with both the higher education and vocational-technical education categories. The data have been treated in such a way, however, that the user can separately identify the technical institute totals from the educational category in question to accommodate the user's analytical needs. Anyone working with these data is cautioned not to duplicate the financial statistics for these institutes in their analysis. The reader should also note there are differences in the reported data for the technical institutes in these two educational categories due to different reporting sources and different financial reporting systems of these sources.

The required historical financial and enrollment data for the educational category K-12 were obtained from the State of Tennessee Annual Statistical Report of the Department of Education. Enrollment projections for K-12 were provided by the Bureau of Educational Research, Memphis State University.

Contact with the various institutions of higher education regarding the select professional programs and collection of the needed historical data were coordinated by the staff of the Tennessee Higher Education Commission (THEC). The purpose of this approach was to insure consistency and comparability of reported data among the varying institutions. Enrollment projections for these various institutions and programs were provided by THEC staff.

The historical, financial, and headcount enrollment data for the four technical institutes as reported in the higher education category were provided by THEC staff, while similar data for secondary and postsecondary vocational programs, including the technical institutes, were made available by the Division of Vocational-Technical Education, Tennessee Department of Education.

Prior to the application of any trend analysis or projection methods, all current dollar series were adjusted to constant 1972 dollars utilizing the "Gross State Product Implicit Deflator" as provided by the Tennessee Econometric Model, Center for Business and Economic Research, The University of Tennessee, Knoxville. This, in effect, provided the research team with two historical data sets for each data series for analysis and trend-fitting purposes. Upon completion of any set of projections in which the constant dollar series yielded the better approximation, UT's Implicit Deflator was utilized in converting the series to current dollar values. Conversely, in those few cases where the current dollar series provided the better estimation model, the UT Implicit Deflator was used for the deflation of resulting projections.

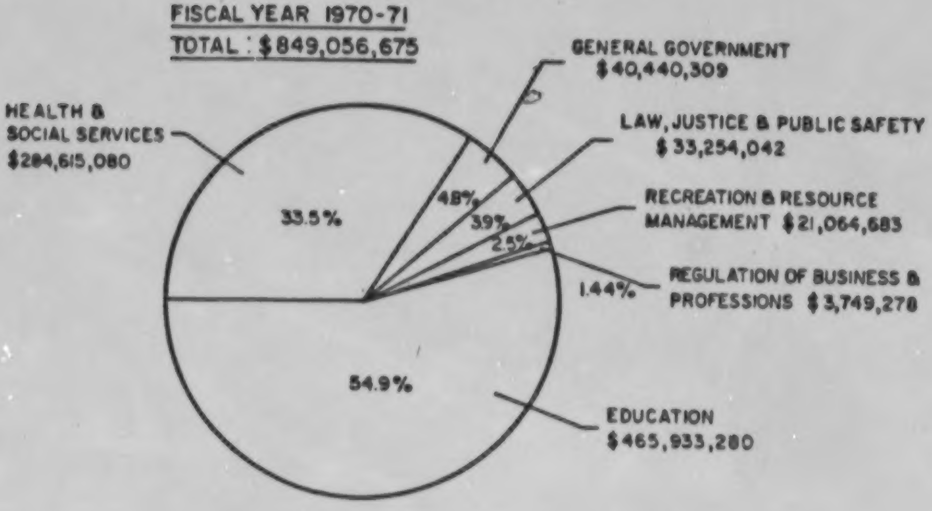
It must be stressed that the resulting projections represent extrapolations of past historical trends for each educational category. While based on rational study and analysis of available pertinent data, the projection models are not designed to foretell future changes in environmental factors or basic funding policy at either the state or federal levels which influence funding of Tennessee educational systems. Unless exception is otherwise noted, the projected values presented should be interpreted as extensions of past historical trends under the assumption that the basic factors and influences of the past will continue undisturbed into the projected period.

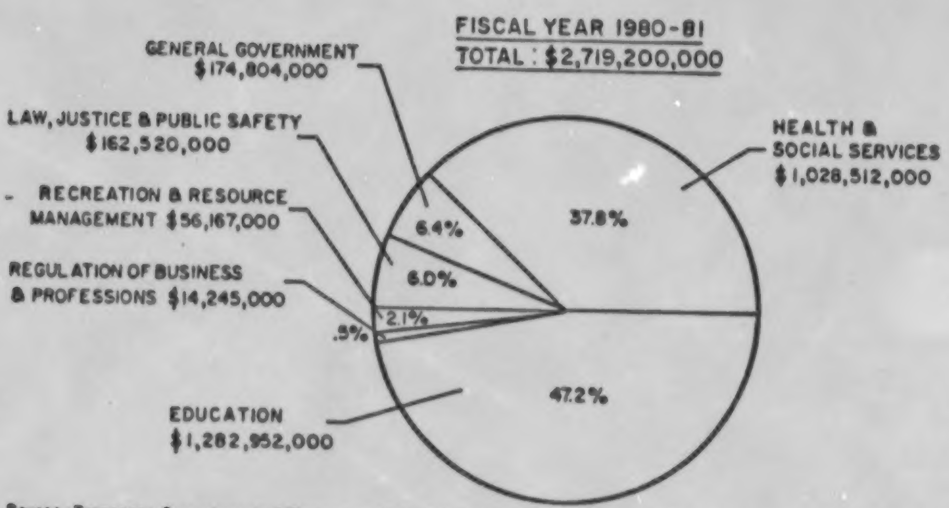
To place the funding of Tennessee's public educational systems into a proper perspective relative to other state functions, the following chart reflects a summary of General Fund disbursements for the fiscal years 1970-71 and 1980-81. As can be seen from these data, General Fund revenues going to education declined, in relative terms, from 54.9 percent in fiscal year 1970-71 to 47.2 percent in fiscal year 1980-81. Education was one of three state services to reflect the relative decline in General Fund revenues, while all other state functions recorded increased shares.

In terms of constant 1972 dollars, the second chart reveals the total General Fund disbursements amounted to $876,219,479 in fiscal year 1970-71 and $1,455,674,518 in fiscal year 1980-81, an increase of $579,455,039 in constant dollars. Of the $579,455,039 increase in the total General Fund between fiscal years 1970-71 and 1980-81, Health and Social Services accounted for the greater constant dollar increase ($256,874,876), followed by Education ($205,965,841), Law, Justice & Public Safety ($52,684,244), General Government ($51,844,093), Recreation and Resource Management ($8,329,408), and Regulation of Business and Professions ($3,756,579).

In terms of percentage changes between the fiscal years 1970-71 and 1980-81, the overall total General Fund (in 72$) increased by 66.1 percent. Translation of this real dollar increase to each service category reveals the

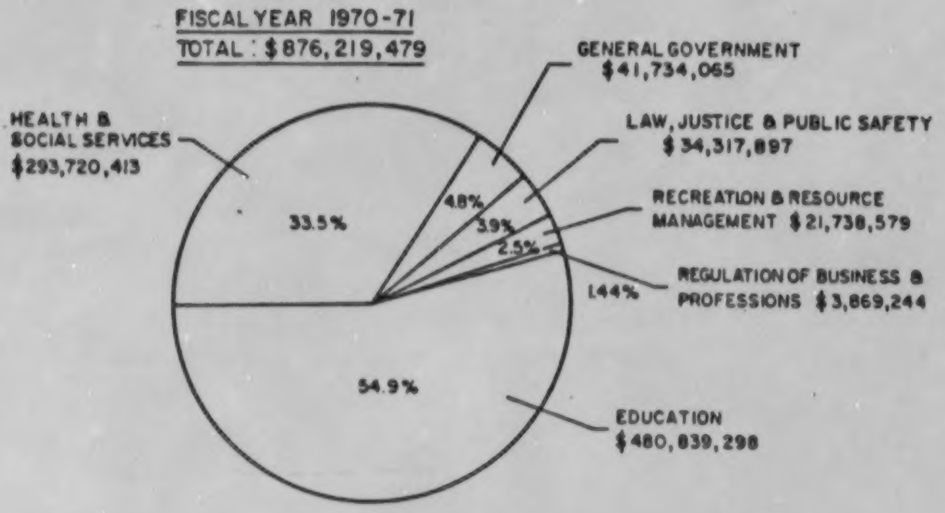
SUMMARY OF GENERAL FUND DISBURSEMENTS FISCAL 1970-71 VERSUS FISCAL 1980-81 (CURRENT $)

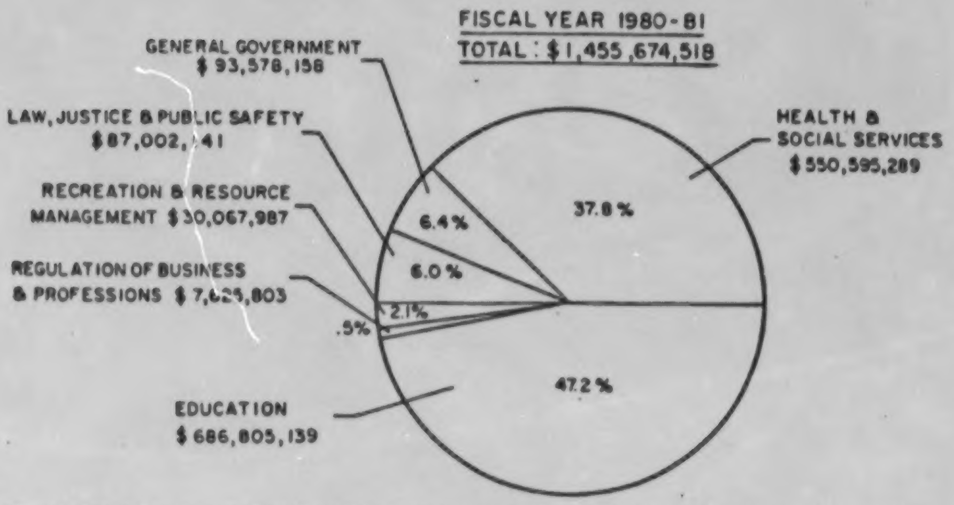




Source: Tennessee Department of Finance and Administration, Annual Financial Report, for fiscal years 1970-71 and 1980-81.

SUMMARY OF GENERAL FUND DISBURSEMENTS FISCAL 1970-71 VERSUS FISCAL 1980-81 (CONSTANT 72$)





Source: Calculated by Bureau of Business and Economic Research, Memphis State University based on data reported in Tennessee Department of Finance and Administration, Annual Financial Report, for fiscal years 1970-71 and 1980-81.

following: Law, Justice and Public Safety reflected the greater percentage change (153.5 percent), followed by General Government (124.2 percent), Regulation of Business and Professions (97.1 percent), Health and Social Services (87.5 percent), Education (42.8 percent), and Recreation and Resource Management (38.3 percent).

In general, it can be observed that education receives the greater proportional share of General Fund revenues. Its relative share has decreased over the 1970-71 and 1980-81 fiscal years. In real dollar terms, education was next to last in the state functional categories in its relative increase in 1980-81 General Fund revenues over the 1970-71 distribution of these dollars.

B. K-12 Projections

Revenue and expenditure projections for public education systems K-12 were to be provided on a total statewide basis. Revenues were to be further categorized by source, including local, state, and federal funding sources. A fourth category, "other revenue sources," was added to maintain consistency with reported total dollar values.

Projection of such money-flow logically began with an analysis of the historical data. Since the forecast time frame was for a 10-year period, an effort was made to collect revenue and expenditure data for the past 20-year period, or yearly data for the 1960-61 to 1980-81 scholastic year period.

It was determined that the court-ordered school busing plans in the state's major metropolitan areas were a primary influencing factor in the irregular movement of the financial statistics in fiscal year 1972-73. In light of this finding, the financial data for this fiscal year were ultimately deleted from further consideration. This predetermined the establishment of fiscal years 1961-62 through 1980-81 as the baseline period for any K-12 forecasts, with fiscal year 1972-73 being suppressed from any prediction techniques or calculations.

In summary, the following general observations can be made. In terms of absolute levels, the state has historically contributed the greater proportion of funding to K-12 educational programs in Tennessee. Local sources contribute the second largest proportion of K-12 educational funds. The gap between the two sources, however, has been closing over the past twenty years until it has reached a point where local contributions almost match state funding contributions. The federal government represents the third largest source of funds, followed by the fourth and last category, "other revenues."

Based on the above observations and the discernible trends in the percentage share statistics, the researchers first addressed the question, "What would be the resulting percentage shares of each source category if the trend of the past nineteen years were to continue into the future?" Percent to total revenue projections for each source category were calculated to the scholastic year 1990-91 utilizing a three-year moving average technique. Briefly, this step resulted in the following: If historical trends established over the past nineteen years were to continue, federal sources would be contributing 16.20 percent of total revenues by 1985 and 18.81 percent by 1991; state sources would account for 37.45 percent by 1985 and fall to 33.03 percent by 1991; local sources would contribute an estimated 43.32 percent by 1985 and 45.62 percent by 1991; and the "other revenue" sources would represent 2.59 percent of total revenues by 1985 and 2.99 percent by 1991.

Up to this point, the analysis had taken a more mechanical approach, relying upon statistical procedures and methods as guidelines in constructing the prediction models. This is, of course, necessary toward understanding the relationship among the various prediction variables. Beyond this point, however, simple mathematical calculations combined with nonmathematical procedures based upon the logical reasoning and judgment of the analyst are necessary inputs.

In light of anticipated cuts in federal funds for public education and other issues impacting educational funding within the state, it was evident that the chances of further continuation of past trends are unlikely. Thus, it was necessary to make intuitive adjustments to the percentage shares of the contributing sources.

Any decrease in federal funding must be sustained by state and/or local revenue source categories. As has already been seen, the state's relative funding effort has been historically declining and local sources' share of effort has been increasing to the point that there would be a cross-over of relative percentage shares for these two categories during the 1981-82 fiscal year. The significant question here is, "To what degree would the state sources be allowed to drop below local contributions?" This is, of course, a question of political and public policy which cannot be realistically answered in this research effort. For purposes of this analysis, however, it has been assumed that a point of equilibrium will be reached in which both local and state sources will contribute approximately identical percentage shares of Tennessee's K-12 educational funding during the forecast period. Thus, in addition to continuing future funding efforts on an equal basis, local and state sources have been assumed to equally share in the compensation necessary to offset any lost federal dollars.

For illustrative purposes, the above logic and assumptions regarding K-12 revenue projections by source are presented in the following tables. The

TOTAL CURRENT DOLLAR REVENUES BY SOURCE FOR TENNESSEE PUBLIC SCHOOL SYSTEMS, GRADES K-12, 1962 THROUGH 1981, AND PROJECTIONS TO 1991 BASED ON SCENARIO I ASSUMPTIONS

Scholastic Year Ending June 30 of:		Total Revenue (000 Current $)	Annual Percentage Change	By Source[1] (000 Current $)				Annual Percentage Change				Percent to Total Revenues[1]			
				Local	State	Federal[2]	Other[3]	Local	State	Federal[2]	Other[3]	Local	State	Federal[2]	Other[3]
1962	Actual	$ 191,400.6	--	$ 73,531.0	$ 109,755.8	$ 2,041.5	$ 6,072.4	--	--	--	--	38.42	57.36	1.07	3.17
1963		210,080.8	9.76	80,083.6	115,732.9	10,449.3	3,814.9	8.91	5.45	411.80	-37.18	38.12	55.09	4.97	1.82
1964		232,652.8	10.74	84,572.7	134,128.6	10,714.9	3,236.7	5.61	15.89	2.54	-15.16	36.35	57.65	4.61	1.39
1965		249,991.4	7.45	93,431.6	139,959.2	13,677.2	2,923.5	10.47	4.35	27.65	- 9.68	37.37	55.99	5.47	1.17
1966		313,153.9	25.27	106,093.4	154,481.2	49,287.2	3,292.1	13.55	10.38	260.36	12.61	33.88	49.33	15.74	1.05
1967		356,165.4	13.73	119,270.2	176,470.4	56,294.8	4,130.1	12.42	14.23	14.22	25.45	33.49	49.55	15.80	1.16
1968		382,976.7	7.53	132,917.7	183,412.7	60,939.6	5,706.7	11.44	3.93	8.25	38.17	34.71	47.89	15.91	1.49
1969		414,715.2	8.29	157,127.6	194,133.5	58,386.3	5,067.8	18.21	5.85	- 4.19	-11.20	37.89	46.81	14.08	1.22
1970		472,250.3	13.87	179,260.7	222,303.4	63,882.0	6,804.2	14.09	14.51	9.41	34.26	37.96	47.07	13.53	1.44
1971		521,125.6	10.35	200,292.8	233,577.2	79,452.6	7,803.1	11.73	5.07	24.37	14.68	38.43	44.82	15.25	1.50
1972		570,505.3	9.49	226,989.8	253,498.1	83,256.7	6,860.7	13.33	8.53	4.79	-12.08	39.78	44.43	14.59	1.20
1973		580,004.1	1.65	221,146.8	264,584.7	86,456.7	7,812.9	- 2.57	4.37	3.84	13.88	38.13	45.62	14.90	1.35
1974		684,649.9	18.04	284,493.1	303,303.1	86,740.3	10,113.4	28.64	14.63	0.33	29.44	41.55	44.30	12.67	1.48
1975		794,506.4	16.05	317,044.6	366,839.2	93,902.2	16,720.4	11.44	20.95	8.26	65.33	39.91	46.17	11.82	2.10
1976		848,378.5	6.78	349,205.7	375,293.4	105,438.4	18,441.0	10.14	2.30	12.29	10.29	41.16	44.24	12.43	2.17
1977		951,159.5	12.11	394,095.3	417,905.5	120,706.9	18,451.7	12.85	11.35	14.48	0.06	41.43	43.94	12.69	1.94
1978		1,035,124.5	8.83	419,049.7	461,288.0	134,380.9	20,405.9	6.33	10.38	11.33	10.59	40.48	44.56	12.99	1.97
1979		1,145,098.3	10.62	462,391.5	497,459.9	158,349.0	26,897.8	10.34	7.84	17.84	31.81	40.38	43.44	13.83	2.35
1980		1,255,231.5	9.62	496,209.1	537,401.8	181,862.3	39,778.3	7.31	8.03	14.84	47.89	39.53	42.81	14.49	3.17
1981		1,342,501.8	6.95	547,166.6	553,353.6	196,936.1	45,065.5	10.27	2.97	8.30	13.24	40.76	41.22	14.67	3.35
1982	Projected	1,526,559.2	13.71	623,294.1	623,294.1	229,594.5	50,376.5	13.91	12.64	16.58	11.83	40.83	40.83	15.04	3.30
1983		1,682,404.6	10.21	681,878.6	681,878.6	259,426.8	59,220.6	9.40	9.40	12.99	17.56	40.53	40.53	15.42	3.52
1984		1,858,761.4	10.48	747,771.7	747,771.7	293,867.0	69,516.9	9.66	9.66	13.28	17.39	40.23	40.23	15.81	3.74
1985		2,058,329.2	10.74	821,890.9	821,890.9	333,449.3	81,304.0	9.91	9.91	13.47	16.96	39.93	39.93	16.20	3.95
1986		2,287,676.3	11.14	906,148.6	906,148.6	379,983.0	95,396.1	10.25	10.25	13.96	17.33	39.61	39.61	16.61	4.17
1987		2,528,567.7	10.53	993,474.3	993,474.3	430,615.1	111,004.1	9.64	9.64	13.32	16.36	39.29	39.29	17.03	4.39
1988		2,787,260.0	10.23	1,086,477.1	1,086,477.1	486,378.3	128,214.3	9.36	9.36	12.95	15.50	38.98	38.98	17.45	4.60
1989		3,069,598.1	10.13	1,186,399.7	1,186,399.1	549,151.1	147,954.6	9.20	9.20	12.91	15.40	38.65	38.65	17.89	4.82
1990		3,379,672.5	10.10	1,294,752.5	1,294,752.5	619,831.9	170,335.5	9.13	9.13	12.87	15.13	38.31	38.31	18.34	5.04
1991		3,723,728.0	10.18	1,413,899.5	1,413,899.5	700,433.2	195,868.1	9.20	9.20	13.00	14.99	37.97	37.97	18.81	5.26

[1] May not add to total due to rounding.

[2] Includes direct federal contributions and federal monies distributed through local agencies.

[3] Includes receipts from tuition from patrons, earnings from investments, individual payments for food, gifts and contributions, miscellaneous local revenues and transfers from other school systems.

Source: Computed by the Bureau of Business and Economic Research, Memphis State University, from data in State of Tennessee Annual Statistical Report of the Department of Education for the Scholastic Year Ending June 30, 1980 (Murfreesboro, Tennessee: Educational Printing, n.d.), and from enrollment projections from the Bureau of Educational Research, Memphis State University.

TOTAL CURRENT DOLLAR REVENUES BY SOURCE FOR TENNESSEE PUBLIC SCHOOL SYSTEMS, GRADES K-12, 1962 THROUGH 1981, AND PROJECTIONS TO 1991 BASED ON SCENARIO II ASSUMPTIONS

Scholastic Year Ending June 30 of:		Total Revenue (000 Current $)	Annual Percentage Change	By Source[1] (000 Current $)				Annual Percentage Change				Percent to Total Revenues[1]			
				Local	State	Federal[2]	Other[3]	Local	State	Federal[2]	Other[3]	Local	State	Federal[2]	Other[3]
1962	Actual	$ 191,400.6	--	$ 73,531.0	$ 109,755.8	$ 2,041.5	$ 6,072.4	--	--	--	--	38.42	57.34	1.07	3.17
1963		210,080.8	9.76	80,083.6	115,732.9	10,449.3	3,814.9	8.91	5.45	411.80	-37.18	38.12	55.09	4.97	1.82
1964		232,652.8	10.74	84,572.7	134,128.4	10,714.9	3,236.7	5.61	15.89	2.54	-15.16	36.35	57.65	4.61	1.39
1965		249,991.4	7.45	93,431.4	139,959.2	13,677.2	2,923.5	10.47	4.35	27.65	- 9.68	37.37	55.99	5.47	1.17
1966		313,153.9	25.27	106,093.4	154,481.2	49,287.2	3,292.1	13.55	10.38	260.36	12.61	33.88	49.33	15.74	1.05
1967		356,165.4	13.73	119,270.2	176,470.4	56,294.8	4,130.1	12.42	14.23	14.22	25.45	33.49	49.55	15.80	1.16
1968		382,976.7	7.53	132,917.7	183,412.7	60,939.6	5,706.7	11.44	3.93	8.25	38.17	34.71	47.89	15.91	1.49
1969		414,715.2	8.29	157,127.6	194,133.4	58,386.3	5,067.8	18.21	5.85	- 4.19	-11.20	37.89	46.81	14.08	1.22
1970		472,250.3	13.87	179,260.7	222,303.4	63,882.0	6,804.2	14.09	14.51	9.41	34.26	37.96	47.07	13.53	1.44
1971		521,125.6	10.35	200,292.8	233,577.2	79,452.6	7,803.1	11.73	5.07	24.37	14.68	38.43	44.82	15.25	1.50
1972		570,585.3	9.49	226,989.8	253,498.1	83,256.7	6,860.7	13.33	8.53	4.79	-12.08	39.78	44.43	14.59	1.20
1973		580,004.1	1.65	221,146.8	264,584.7	86,456.7	7,812.9	- 2.57	4.37	3.84	13.88	38.13	45.62	14.90	1.35
1974		684,649.9	18.04	284,493.1	303,303.1	86,740.3	10,113.4	28.64	14.63	0.33	29.44	41.55	44.30	12.67	1.48
1975		794,506.4	16.05	317,044.6	366,839.2	93,902.2	16,720.4	11.44	20.95	8.26	65.33	39.91	46.17	11.82	2.10
1976		848,378.5	6.78	349,205.7	375,293.4	105,438.4	18,441.0	10.14	2.30	12.29	10.29	41.16	44.24	12.43	2.17
1977		951,159.5	12.11	394,095.3	417,905.5	120,706.9	18,451.7	12.85	11.35	14.48	0.06	41.43	43.94	12.69	1.94
1978		1,035,124.5	8.83	419,049.7	461,288.0	134,380.9	20,405.9	6.33	10.38	11.33	10.59	40.48	44.56	12.99	1.97
1979		1,145,098.3	10.62	462,391.5	497,459.9	158,349.0	26,897.8	10.34	7.84	17.84	31.81	40.38	43.44	13.83	2.35
1980		1,255,231.5	9.62	496,209.1	537,401.8	181,842.3	39,778.3	7.31	8.03	14.84	47.89	39.53	42.81	14.49	3.17
1981		1,342,501.8	6.95	547,166.6	553,353.8	196,936.1	45,045.5	10.27	2.97	8.30	13.24	40.76	41.22	14.67	3.35
1982	Projected	1,526,559.2	13.71	631,537.5	631,537.5	213,260.3	50,376.5	15.42	14.13	8.29	11.83	41.37	41.37	13.97	3.30
1983		1,682,404.6	10.21	699,712.1	699,712.1	223,759.8	59,220.6	10.80	10.80	4.92	17.56	41.59	41.59	13.30	3.52
1984		1,858,741.4	10.48	776,953.9	776,953.9	235,502.5	69,516.9	11.04	11.04	5.25	17.39	41.80	41.80	12.67	3.74
1985		2,058,329.2	10.74	864,292.4	864,292.4	248,440.3	81,304.0	11.24	11.24	5.49	16.96	41.99	41.99	12.07	3.95
1986		2,287,676.2	11.16	964,713.1	964,713.1	262,854.0	95,396.1	11.62	11.62	5.80	17.33	42.17	42.17	11.49	4.17
1987		2,528,567.7	10.53	1,070,595.6	1,070,595.6	276,625.3	111,004.1	10.98	10.98	5.24	16.36	42.34	42.34	10.94	4.39
1988		2,787,268.0	10.23	1,184,310.2	1,184,310.2	290,433.3	128,214.3	10.62	10.62	4.99	15.50	42.49	42.49	10.42	4.60
1989		3,069,598.1	10.13	1,308,569.7	1,308,569.7	304,504.1	147,954.6	10.49	10.49	4.84	15.40	42.63	42.63	9.92	4.82
1990		3,379,672.5	10.10	1,445,148.0	1,445,148.0	319,379.1	170,335.5	10.44	10.44	4.88	15.13	42.76	42.76	9.45	5.04
1991		3,723,728.0	10.10	1,596,362.2	1,596,362.2	335,135.5	195,868.1	10.46	10.46	4.93	14.99	42.87	42.87	9.00	5.26

[1] May not add to total due to rounding.

[2] Includes direct federal contributions and federal monies distributed through local agencies.

[3] Includes receipts from tuition from patrons, earnings from investments, individual payments for food, gifts and contributions, miscellaneous local revenues and transfers from other school systems.

Source: Computed by the Bureau of Business and Economic Research, Memphis State University, from data in State of Tennessee Annual Statistical Report of the Department of Education for the Scholastic Year Ending June 30, 1980 (Murfreesboro, Tennessee: Educational Printing, n.d.), and from enrollment projections from the Bureau of Educational Research, Memphis State University.

first table, representing the first scenario of future events, demonstrates the likely relative shares of revenue source categories under the basic assumption that the federal government continues past levels of funding effort for Tennessee's public school systems, grades K-12. These calculations are provided as benchmarks for any analytical requirements. The second table (Scenario II) represents a recapitulation of the first table with one basic difference -- a reduced financial effort of federal sources is projected. The basic assumptions and logic of this table and the resulting calculations of projected dollar values represent the "most likely" scenario of events in the future.

C. Vocational-Technical Education Projections

Four sub-categories of vocational-technical education within the state were delineated by delivery systems. These included: (1) local education agencies, (2) state area vocational-technical schools, (3) state technical institutes, and (4) state community colleges. Although annual financial data were requested for fiscal years 1961 through 1981, the Division of Vocational-Technical Education of the Department of Education was able to reconstruct from their records the required data only as far back as fiscal year 1968-69. This, in effect, limited the trend-fitting analysis to thirteen historical data points. Furthermore, only total dollar expenditures were reported. The resulting projections, then, are based on expenditure data with no revenue information available.

Annual enrollment data for each of the four delivery systems were also provided by the Division's staff, including projections to the scholastic year 1990-91. The forecasting team had to resolve two minor difficulties in the projected enrollment data. The first dealt with the Itinerant Program administered by the area vocational-technical schools (AVTS). The funds distributed for this program could not be identified separately from the area schools' total expenditures. This complicated any trend-fitting procedure, since the AVTS enrollment projections, as provided, did not include the Itinerant Program enrollment. To insure compatibility of the financial and enrollment data, the forecasting team adjusted the Division of Vocational-Technical Education's enrollment projections by an estimated enrollment in the Itinerant Program. The Itinerant Program enrollment estimates were derived by utilizing a mean forecast technique based on seven available historical data points. The data, while not reflecting any apparent growth or decline trends, did exhibit erratic movements within a range of 6,445 to 10,380 students. Thus, the mean value, or 8,486 students, was felt to be the best forecast estimate given the data available. This estimate was added to each annual projected enrollment figure provided by the Division to derive the final enrollment projection for area vocational-technical schools.

The second difficulty to be overcome was somewhat similar, but involved Adult Training Programs administered by each local education agency (LEA). In this case, the problem was resolved by adjusting the given enrollment projection for LEAs utilizing a simple time-series projection based on annual enrollments for the Adult Training Program from fiscal year 1969 to 1981. This method appeared to be appropriate, since the historical data reflected an approximate straight-line growth trend over the thirteen year period. The resulting projections were then added to total LEA enrollment figures provided by the Division of Vocational-Technical Education.

Taking into consideration the state's four vocational-technical education delivery systems, it can be stated that over the observed historical period, funding from federal sources has generally reflected a declining trend in real dollar terms. Perhaps the one exception can be found with the state's technical institutes, where funding is in a no-growth/no-decline situation. For local education agencies and the area vocational-technical schools, the federal real dollar losses are significant. For example, local education agencies' funds from federal sources have declined nearly $7.3 million in real dollars over the past six-year period, a drop of 58.5 percent. It may also be noted that federal monies constitute a large proportion of the total funding for LEAs, which makes this loss of federal dollars even more significant. Area vocational-technical schools saw their 1981 federal funds drop by $720.7 thousand over the six-year period, to 32.1 percent of the 1975 federal funding level.

Correspondingly, the federal relative funding effort, expressed as a percent to total funds of the individual delivery systems, reflects a general downward trend. For 1975, federal dollars represented 78.7 percent of LEAs total 331.45 funds, 23.8 percent of total AVTS funds, 19.8 percent of total technical institute funds, and 14.2 percent of total community college funds. By 1981, the federal relative percentage share was 56.0 percent of the LEA 331.45 fund, 14.5 percent of total AVTS funds, 11.7 percent of total technical institute funds, and 7.0 percent of the community college funds.

The "state and other combined" sources have offset federal dollar losses. It can be safely assumed that the state sources have shouldered most of this burden. In 1981, state funds accounted for 69.2 percent, or $30,695.9 thousand (72$), of total LEA funds, and 81.8 percent, or $8,596.7 thousand (72$), of total area vocational-technical school funds. "State and other combined" source funds accounted for 88.3 percent, or $5,986.5 thousand (72$), of total technical institute funds, and 93.0 percent, or $7,119.7 thousand (72$), of total community college funds.

TOTAL AND PER STUDENT VOCATIONAL-TECHNICAL FUNDS BY DELIVERY SYSTEM, 1969 THROUGH 1981 AND PROJECTIONS TO 1991

		Total Vocational-Technical Funds (000$)					Total Vocational-Technical Funds Per Student (Current $)				
Scholastic Year Ending June 30 of:		Local Educ. Agencies	AVTS	Technical Institutes	Community Colleges	Total State-Wide Voc.-Tech. Educ.	Local Educ. Agencies	AVTS	Technical Institutes	Community Colleges	Total State-Wide Voc.-Tech. Educ.
1969	Actual	$ 13,308.9	$ 6,230.6	$ 1,604.3	$ 616.0	$ 19,759.8	$112.20	$ 275.40	$ 742.40	$ 627.90	$144.10
1970		16,028.4	5,453.0	2,425.4	821.9	24,728.7	145.20	251.40	1,047.70	424.50	181.30
1971		18,886.8	6,920.7	4,157.4	1,273.2	31,238.1	167.7	292.20	1,280.38	466.72	219.53
1972		27,200.4	8,027.0	5,020.1	1,902.3	42,149.8	233.58	308.64	1,501.68	407.17	280.12
1973		28,054.7	8,731.3	5,793.8	2,397.5	44,977.3	233.27	289.05	1,075.52	519.05	280.26
1974		35,611.0	10,414.4	3,497.9	4,647.2	54,170.5	276.89	341.77	722.41	500.83	312.75
1975		41,676.0	11,722.4	4,380.6	5,685.1	63,464.1	296.17	393.09	698.10	466.95	335.81
1976		41,327.9	12,807.7	5,263.3	6,093.6	65,492.5	271.42	410.57	758.62	409.43	319.04
1977		48,240.3	14,458.7	6,085.7	7,152.6	75,937.3	251.24	425.13	751.51	490.31	305.33
1978		60,463.0	17,035.0	7,568.9	8,189.1	93,236.0	275.24	468.77	723.77	463.87	328.18
1979		72,835.8	17,914.4	9,735.4	9,990.0	110,475.6	352.00	541.37	821.28	528.80	408.00
1980		79,875.2	19,495.3	11,450.3	11,407.1	122,227.9	338.54	539.48	824.30	464.69	393.63
1981		82,887.5	19,628.0	12,670.8	14,301.2	129,487.5	352.26	617.45	811.90	543.44	419.00
1982	Projected	94,374.7	19,334.7	14,620.7	13,574.0	141,904.1	407.10	631.34	893.25	630.85	472.45
1983		100,436.7	20,038.0	16,185.8	15,030.8	151,691.2	439.70	679.16	952.11	678.81	510.58
1984		109,255.8	22,969.8	18,125.9	16,506.2	166,975.6	474.00	733.11	1,007.00	729.94	552.09
1985		120,672.1	24,864.4	20,243.4	18,096.0	183,875.9	510.30	793.45	1,065.44	784.00	593.37
1986		134,612.8	26,803.4	22,605.2	20,004.7	204,026.1	550.00	855.33	1,130.26	842.00	637.91
1987		147,204.6	28,752.2	24,752.5	21,513.2	222,222.6	589.90	917.52	1,201.58	903.12	683.18
1988		157,950.4	32,055.0	27,341.8	23,344.8	240,692.0	632.30	986.95	1,271.71	966.42	733.99
1989		167,841.3	34,367.2	29,893.0	25,151.1	257,252.7	678.00	1,058.14	1,352.62	1,035.45	788.08
1990		177,361.3	38,316.1	32,442.1	26,947.7	275,067.2	726.50	1,137.70	1,441.87	1,109.42	847.37
1991		189,684.0	41,050.7	35,422.1	28,941.4	295,098.2	778.30	1,218.85	1,533.42	1,188.22	908.42

D. Higher Education Projections

The Tennessee Higher Education Commission (THEC) provided the historical, financial totals for the State Board of Regents, The University of Tennessee, and the administrative units of these systems. Initially, the data requested included annual financial statistics for the period covering fiscal years 1960-61 through 1980-81 (the latest year for which data were available). The detailed information was to include: (1) unrestricted revenues reflecting the source sub-categories of tuition and student fees, state appropriations, federal revenues, and other unrestricted revenues, (2) restricted revenues showing state funds, federal funds, and other restricted funds, (3) auxiliary and hospital revenues, and (4) expenditures reflecting unrestricted, restricted, and auxiliary and hospital expenditures.

While THEC was successful in reconstructing from its records most of the required historical data, there were certain data points that were not available due to record gaps and changes in accounting procedures. For example, prior to fiscal year 1966-67, all restricted funds were included in "other unrestricted funds," and it was not until fiscal year 1974-75 that delineation of state, federal, and "other" restricted fund sources could be made. Because of these constraints and limited data points, the forecasting team was able to project only the total of the restricted funds category, with any further breakdown being beyond determination. On the other hand, revenue sources for the unrestricted funds could be determined.

The projection of the higher education revenues includes an analysis of the total of the three types of funds normally associated with the state's higher education systems -- i.e., "total unrestricted funds," "total restricted funds," and "total auxiliary and hospitals." To provide the detail required, both the historical and projected data were formatted in current and constant dollars. The two following tables illustrate the total revenues broken down by system, and the total revenues per student broken down in a similar fashion.

TOTAL HIGHER EDUCATION CURRENT DOLLAR REVENUE (000$)

Scholastic Year Ending June 30 of:	Total Public Higher Education Revenues	------------Unrestricted Revenues------------		
		Total Statewide	Technical Institutes	Total Higher Education Systems
1961	N.A.	N.A.		N.A.
1962	N.A.	46,770.0		46,770.0
1963	N.A.	51,441.0		51,441.0
1964	N.A.	60,450.0		60,450.0
1965	N.A.	N.A.		N.A.
1966	N.A.	83,414.0		83,414.0
1967	114,854.0	80,230.0		80,230.0
1968	N.A.	N.A.	N.A.	103,042.0
1969	N.A.	N.A.	N.A.	111,984.0
1970	196,370.2	135,410.0	2,580.0	132,830.0
1971	224,936.4	151,268.0	4,121.0	147,147.0
1972	260,398.4	178,345.0	5,039.0	173,306.0
1973	295,842.5	203,381.0	5,614.0	197,767.0
1974	331,425.5	230,202.0	4,984.0	225,218.0
1975	373,690.6	252,357.0	5,978.0	246,379.0
1976	418,622.8	270,118.0	6,663.0	263,455.0
1977	465,048.9	303,836.0	8,743.0	295,093.0
1978	519,524.9	340,597.0	9,832.0	330,765.0
1979	587,771.3	363,007.0	13,619.0	349,388.0
1980	667,020.5	409,868.0	16,108.0	393,760.0
1981	738,170.7	437,608.0	17,760.0	419,848.0

		------------Unrestricted Revenues------------		
Projected	Total Public Higher Education Revenues	Total Statewide	Technical Institutes	Total Higher Education Systems
1982	802,517.6	470,272.6	21,748.1	448,524.5
1983	894,911.4	521,014.0	24,185.8	496,828.2
1984	990,029.6	570,324.3	27,276.4	543,047.9
1985	1,093,697.6	623,928.5	30,657.7	593,270.9
1986	1,205,272.2	679,627.5	34,431.7	645,195.8
1987	1,309,737.9	725,528.8	37,834.8	687,694.0
1988	1,429,422.2	781,177.0	41,986.3	739,190.6
1989	1,555,952.5	837,558.1	46,045.0	791,513.1
1990	1,695,534.8	900,943.0	50,068.8	850,874.1
1991	1,838,591.0	960,427.7	54,821.9	905,605.8

TOTAL HIGHER EDUCATION CURRENT DOLLAR REVENUES PER STUDENT (CURRENT $)

Scholastic Year Ending June 30 of:	Unrestricted Revenue Total Statewide	 Technical Institutes	 Total Higher Education Systems
1961	773.80		773.80
1962	1,162.20		1,162.20
1963	1,209.40		1,209.40
1964	1,298.70		1,298.70
1965	1,196.40		1,196.40
1966	1,324.00		1,324.00
1967	1,158.70		1,169.10
1968	N.A.	N.A.	1,374.10
1969	N.A.	N.A.	1,392.10
1970	1,486.30	1,114.50	1,496.00
1971	1,536.30	1,269.20	1,545.40
1972	1,706.20	1,507.30	1,712.80
1973	1,820.10	1,042.10	1,859.50
1974	1,950.40	1,029.30	1,989.80
1975	2,007.20	952.70	2,062.60
1976	1,935.90	960.40	1,987.00
1977	2,161.90	1,079.70	2,228.00
1978	2,327.90	942.70	2,434.30
1979	2,418.30	1,148.90	2,527.10
1980	2,652.80	1,159.60	2,800.30
1981	2,781.80	1,138.00	2,962.80

	------------------Unrestricted Revenue------------------		
Projected	Total Statewide	Technical Institutes	Total Higher Education Systems
1982	3,064.50	1,328.70	3,271.70
1983	3,334.60	1,422.70	3,568.00
1984	3,607.70	1,515.40	3,876.50
1985	3,892.00	1,613.60	4,198.40
1986	4,195.00	1,721.60	4,543.30
1987	4,506.10	1,836.60	4,897.80
1988	4,827.70	1,952,90	5,268.30
1989	5,179.40	2,083.50	5,669.50
1990	5,571.40	2,225.30	6,112.20
1991	5,968.70	2,373.20	6,571.40

CHAPTER THREE

EDUCATIONAL LAW

I. INTRODUCTION

Educational law forms the framework which creates and regulates public education in the United States. The fundamental principles of legal control are those prescribed by our constitutional system, including the written constitutions of the fifty states and the federal government (Alexander, 1980, 1). The federal government plays an indirect role in the development of public education, and the Tenth Amendment of the Constitution defines the delegation of the powers to be exercised by the states.

> Rights reserved to states or people.--The powers not delegated to the United States by the Constitution, not prohibited by it to the states, are reserved to the states respectively, or to the people (Constitution of the United States, Amendment 10).

While states organize school districts and govern the management and operation of the public schools directly, the federal government can exercise control through guidelines for the use of federal funds, by regulations the Congress has authorized within the commerce clause, and the courts may constrain public school actions when in conflict with federal constitutional provisions protecting individual rights and freedoms (Alexander, 44).

In Tennessee, the first Constitution in 1796 did not address education, but the Constitutions of 1835 and 1870 have similar articles. The articles both state the value of knowledge, learning and virtue, and assign the responsibility for the control of public education to the General Assembly (Constitution of the State of Tennessee, 1870, Article XI, Section 12). In 1978, the section stating the responsibilities of the state for public education was rewritten and approved.

> Education's inherent value -- Public schools -- Support of higher education.--The State of Tennessee recognizes the inherent value of education and encourages its support. The General Assembly shall provide for the maintenance, support and eligibility standards of a system of free public schools. The General Assembly may establish and support such postsecondary educational institutions, including public institutions of higher learning, as it determines (Tennessee Code Annotated, Volume 1, 817).

In addition to the constitutional allowance for state control of education, court decisions have established precedents that indicate the legislature has the prerogative to govern education. The true interpretation of these decisions means that "education is governed by the democratic legislative process, which requires action by both the legislative and executive branches of government" (Alexander, 71).

The field of education is not immune to legal action and in the past three years, the U. S. Supreme Court has expanded the right of plaintiffs to sue school systems under the 1871 Civil Rights Act. However, in a recent decision, the Justices ruled that public schools cannot be held liable for punitive damages awarded as payment for intentional violations of rights (Splitt, 1981, 13). In order for educators and other interested parties to keep abreast of the prevailing legislation, Tennessee Code Annotated should be comprehensive, well organized, adequately indexed, clearly written in intent, and up-to-date.

Since the operation of public education in Tennessee is based upon the express or implied authority of statute, it was determined by the Task Force that a thorough review of education statutes would be necessary. The Office of

Educational Services at George Peabody-Vanderbilt conducted the review of the Tennessee Code Annotated and the following purposes were outlined for the investigation:

1. reclassifying the items in the code into three major divisions (public schools and special schools, vocational-technical education, higher education and professional schools)
2. determining the overlap and relevancy of items in the code
3. determining the clarity of items in the code relative to various governmental responsibilities
4. assessing the codes for areas of omission
5. proposing a system for showing relationships between board policies and the items in the code.

Special attention was given to the area of governance of education in Tennessee, which is an important area of inquiry for the comprehensive education study.

II. EDUCATIONAL REVIEW OF TENNESSEE CODE ANNOTATED

"There is established a system of public education" (49-101). So begins Tennessee Code Annotated, Title 49, the accumulation of statutes and regulations dealing with the nature, structure, and governance of public schooling within the state. The simplicity of that initial statute belies the complexity of the legal framework by which Tennessee schools are governed.

In order to develop a perspective on the existing state of educational law in Tennessee, a model for evaluation has been formulated and utilized in this report. The model focuses on content and structure of existing statutes, but the format in which statutes are presented is also considered. That is comments are directed to both code and code book. Six general categories of inquiry have been defined through a review of Title 49. The most mundane category of the investigation deals with the minutiae inherent in a publication as complex as Tennessee Code Annotated. In the course of scrutinizing the code, a handful of printing errors have been found in the code book. These errata, although contained in statutes dealing with various types of schools, are so few in number that they are pointed out together under Miscellaneous Regulations later in this section of the report.

A second area of comment is directed toward definitional difficulties. Those regulations which seem unclear or confusing in their terminology are included in this grouping. In some instances, terminology seems outdated and changes in the code book would alleviate confusion. However, in other statutes, an alteration in terminology might also bring about a change in statutory meaning, thereby altering the code.

Those measures in which the roles or duties of individuals/entities appear to be unclear or in conflict comprise a third category.

The fourth group of statutes discussed includes those measures which overlap.

A considerable number of the enactments are included in this analysis section because of their apparent obsolescence, lack of relevance, or need to be brought up to date--the criteria for the fifth type of category. As with the comments addressing definitional problems, this category addresses both code and code book.

Lastly, a category of omissions has been included in this review. Again, both code and code book are considered.

This analytical portion of the report follows the format of the Code in organizing three major divisions (public schools and special schools, vocational-technical education, higher education and professional schools). That is, commentary is presented under the same headings for types of educational institutions. However, while remarks tend to follow the same subdivisional pattern (Governance and Organization, Fiscal Affairs, etc.), formal subdivision of headings in this section has been deemed unnecessary. The majority of statutes in Title 49 seem to be clearly and adequately written and need no discussion. Thus, this analytical section contains reference to considerably fewer enactments than the comprehensive classification, making topical division superfluous.

Additionally, because of the relatively small number of statutes which falls under any one category of review, commentary is not formally subdivided by type of observation. Rather, discussion is written in a more general format to provide a broader perspective on the shortcomings of legislation which deals with particular types of educational institutions. Comments in reference to the code and remarks regarding the code book are not recorded separately.

Special Schools

Review of the special schools legislation has pinpointed some problems of definition, overlap of statutes, and two questions of statutory relevancy. The following comments deal more with structure than substance. Nonetheless, remarks are made to foment needed change no matter how trivial to minimize confusion in interpreting educational legislation.

In providing for the education of the blind, one measure outlines the options available to such students (49-1731). In that measure, one option allows for the education of blind students through courses of study ". . .

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peculiarly adapted for the blind, and which (have) been approved by the commissioner of institutions." Prior to 1947, the special schools were under the jurisdiction of a governmental department of institutions. Legislation in that year transferred the special schools to the State Board of Education. It is presumed that the above-mentioned approval powers were transferred to the Commissioner of Education, but there is no indication that such is the case. Clarification on the matter of responsibility for the approval of curricula for the blind is called for. In this instance, an alteration in the code book seemingly would not precipitate a change in the intent of the code.

Another definitional problem concerns special education resources centers (49-2946). The law states that ". . . each school district and state institution shall establish and maintain" a resources center for special education materials. The text continues by outlining the requirements for those centers, but in terms directed more toward public school systems than toward all educational agencies. Other related legislation (49-2942, 49-2951) makes it clear that vocational-technical schools and institutions of higher learning should be included in the provision of special education materials. However, the use of public school-oriented terminology and the lack of a clear meaning for "state institution" obscure the notion that special education resources are to be available in educational entities other than elementary and secondary schools.

A potentially more serious problem of terminology is found in a statute regarding the provision of special education services in public schools (49-2912). The action is labeled as policy. In other chapters of Title 49, similar statements are represented as "legislative intent." It is the role of the legislature to make law. It is or should be the role of the governing boards established by law (e.g., State Board of Education) to formulate

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policy. Legislatively established "policy" has the force of law; it provides for no leeway in implementation or flexibility in interpretation. While it is highly desirable that the intent of legislation be made clear, legislative statements of purpose should not be designated as policy. In the case of 49-2912, the terminology should be brought in line with other similar enactments, while keeping in mind the functions of all of the various agencies involved with the governance of public schooling. Here, however, changes in terminology may alter the statute's meaning as well as its form.

An overlap is apparent in legislation establishing a school for the deaf in West Tennessee. One measure (49-3102) calls for the establishment of a facility for the deaf in Madison County; a second measure (49-3103) states that the West Tennessee School for the Deaf is to be located in Shelby County. Obviously, two such educational facilities in such close proximity would constitute an unneeded duplication of services. In practice, a facility providing special services for the deaf is operated in Madison County on a non-residential basis. A deaf school in Shelby County has never been established. The two conflicting acts regarding a school for the deaf in West Tennessee should be reconciled with each other and with reality.

A portion of the legislation in Title 49, Chapter 9 delimits the use of corporal punishment in penal and reformatory institutions (49-9-201 - 49-9-205). No other mention of such facilities is in Title 49; provisions which establish and govern those types of institutions are codified in Title 4. If there is no governance-oriented relationship between penal and reformatory institutions and the boards which regulate educational institutions, the statures dealing with corporal punishment in penal and reformatory institutions should be removed to Title 4. However, if the State Board of Education or another of the educational governing bodies has jurisdiction over penal and reformatory institutions, then those relationships should be clarified and codified within a separate chapter of Title 49 along with the corporal punishment statutes. The relevance of one special school statute is questioned. In 49-3027, funds are appropriated for reader services to blind graduate students ". . . for each year of the 1957-59 biennium, beginning July 1, 1957, and for each thereafter . . . ." If reader services are no longer funded, this statute should be removed from TCA. If funds for reader services are still allocated, the measure should be rewritten to exclude limitation to the 1957-59 biennium. Again, any alteration in the code book may also alter the law.

Finally, the full spectrum of legislation for the special schools should be reviewed for its continued relevancy. Within the last few years, federal legislation has greatly altered procedures for the education of the handicapped. Public school systems have assumed many of the educational functions of special schools by providing the "least restrictive environments" mandated by federal law. An increasing number of blind and deaf students attend regular public schools, and an increasing number of students in the Tennessee School for the Blind and the Tennessee School for the Deaf have multiple handicaps. It is suggested that special schools legislation be updated to reflect the changing roles of the schools for the blind and deaf. Also, it is suggested that legislation more clearly defining the special functions of Tennessee Preparatory School and Alvin C. York Agricultural Institute be considered. Clear distinctions need to be made between the public school statutes which apply to special schools and those which exempt special schools.

Public Schools

At the state level, public schools are governed and monitored by the Commissioner of Education, the State Board of Education, and the Department of Education. The enactments which stipulate the duties and responsibilities of Commissioner, Board, and Department are numerous and varied. A careful perusal of those enactments indicates two types of problems which seem widespread. One difficulty centers around role clarity, and the other concerns the relevance of statutes.

A side-by-side comparison of statutes applicable to the Commissioner, the Board, and the Department would reveal that each of those entities has similar functions regarding different aspects of public education. The approval of educational programs is a function of all three state-level governing bodies. Also, various types of assistance are to be rendered to local school systems, but in some instances the Commissioner is charged with that responsibility while in others the Department is so charged. Some actions of the State Board are to be carried out through the Commissioner and some by the Board itself. In some statutes state approval is called for but the agency which is to grant or deny that approval is not named. Lastly, some functions are assigned, particularly to the Commissioner, which include no allowance for the delegation of authority to another appropriate governing body. Roles and responsibilities of state level administrative branches should be more tightly defined. A clearer, more specific statement of the relationships between Commissioner, Board, and Department should be prescribed. Also, any recent acts which authorize additional duties for state level officials should be incorporated into those statutes in which functions are currently delineated.

Several of the acts which detail the functions of school administrators at the state level are out-of-date. The statute in which powers and duties of the Commissioner are spelled out (49-105) still makes provision for the filling of positions which reorganization has eliminated. That same statute allows for a set amount of compensation for special services which no longer seems realistic. These measures should be updated through revision of the code.

In 49-113, the State Board of Education is authorized to lease state property to collegiate sororities and fraternities. That law was passed at a time when institutions of higher learning were under the jurisdiction of that Board. Since then, the governance of colleges and universities has changed. It seems that 49-113 should reflect that change.

Legislation which defines the nature and functions of local school governance and organization contains problems of definition, overlap, and relevancy. A number of statutes require attention and clarification.

Several terms related to local school governance are questioned. In a measure regarding safety instruction (49-1917), reference is made to school commissioners. The context of the statute seemingly indicates that such commissioners are the equivalent of school superintendents. However, private acts use the term "school commissioners" as a title for local board members (e.g., Hardin County Private Acts, 1939, Chapter 137). Because the phrase school commissioners is neither used nor defined anywhere else in Title 49, it is likely that the appropriate administrators might be confused with the State Commissioner of Education. An alteration in the code book to refer the reader to private acts or any other source in which "school commissioners" is defined could clarify this matter.

Two statutes define the grade structure of high schools and junior high schools in Tennessee (49-1102, 49-1103). The grade structures allowed could lead to incompatibility within a school district, particularly one with several secondary schools.

The superintendents of local school districts are directed to keep minutes of the proceedings of local board meetings (49-224). In some districts, "keep" is defined to mean "maintain"; in others, the term is interpreted as meaning "record." Another statute (49-226) that allows for compensation to superintendents who serve as secretary to the board compounds the problem. A clearer indication of the intended meaning of the term "keep" would eliminate confusion in many school systems in Tennessee.

Several local school governance laws seem to overlap in their intent and their placement in Title 49. Two statutes (49-1309, 49-1320) which are codified among the rights and duties of teachers would be more appropriately placed among the measures dealing with discipline and school security. Additionally, those same two enactments prescribe duties of principals, as do several of the measures in the state discipline laws. Such measures should be coordinated with the specific legislation in which the duties of principals are spelled out (49-254).

The relevancy of several public school governance ordinances should be considered. Two laws prohibit assignment or busing of students to achieve racial balance (49-1771, 49-2201), which might be in contradiction to federal judicial rulings. Another statute allows for local systems to operate schools segregated by sex (49-230); such facilities are outdated by federal equal opportunity legislation. In 49-213, provisions are made for filling vacancies on local boards of education. The constitutional amendments of 1978 altered the method by which vacancies are filled; such a change should be reflected in

Tennessee Code Annotated. Other recent action has brought about a sunshine law in Tennessee which prohibits non-public hearings before boards of education as allowed in 49-1416.

One law which falls under the general heading of public school educational programs is in need of review. The provision in which Negro History is mandated (49-1927) does not include a clear exposition of the applicable guidelines in the enactment.

Three acts codified in Title 49 (49-1922, 49-1923, 49-1307) allow for prayer and Bible reading in public schools. Such provisions have been ruled unconstitutional by the United States Supreme Court. The repeal of unconstitutional enactments should be a legislative consideration.

Questions of relevancy and omission arise in regard to public school personnel matters.The permanent certification of World War I veteran teachers is still guaranteed (49-1228 - 49-1231) despite the fact that any beneficiary of that legislation is well beyond retirement age. Another statute calling for the loss of tenure due to age (49-1407) is in contradiction to federal age discrimination laws.

Finally, two omissions occur in the public school legislation. Not all of the reasons for teacher dismissals stated within the tenure laws (49-1412) are included in the dismissal section of duties of local boards of education (49-214). And, considerable confusion arises regarding 49-1403 in that it does not specify what happens when a superintendent fails to notify the board prior to reelection that a teacher will retain tenure status. Perhaps, a provision for formal application for and approval of tenure should be enacted.

Vocational-Technical Education

The matter of vocational-technical education is perhaps the most confusing issue pertaining to public schools in Tennessee. Legislation has established area vocational-technical schools (AVTS) and state technical institutes which fall within the jurisdiction of the State Board for Vocational Education (49-2616) along with the operation of facilities and programs for vocational rehabilitation (49-2802). Yet, measures also allow for vocational-technical programs to be operated in comprehensive high schools that are under the authority of the State Board of Education (49-27-107). While local boards of education may provide local governance for both public schools and AVTS, while the difference between the State Board for Vocational Education and the State Board of Education is titular only, and while legislation calls for careful planning to minimize duplication of curricular offerings and to maximize the efficiency of offering vocational education programs, the potential for such duplication is great due to the structure of the governance system for vocational-technical schools. Not only is it possible for comprehensive high schools, AVTS, and technical institutes to provide similar educational experiences for students, but also the curricula of the state community colleges, which fall under the control of an entirely different governing body, the Board of Regents, appear to be largely vocational in nature, leading to an increased potential for duplication of programs between technical institutes and community colleges. Finally, one facility, the Chattanooga State Technical Community College, is a hybrid institution combining the programs of an area vocational-technical school and a community college in an institution under the Board of Regents' control (49-3250, 49-2650 - 49-2653).

Legislation has established an advisory council for vocational-technical education (49-27-201). The primary responsibilities of this committee are to make policy recommendations to and provide long-range plans for the State Board for Vocational Education concerning the promotion and delivery of vocational-technical education in the state.

Agreements between the various types of institutions and an umbrella-like communication arrangement involving AVTS and technical institutes have alleviated the coordination problem somewhat, but it remains that the statutes governing Tennessee vocational education need to be reviewed with the intention of preventing future problems with program development and implementation.

While overlap in governance is the primary problem area regarding vocational-technical education, several lesser matters should be considered also. Some of the current vocational-technical education statutes need to be examined for their applicability now and in the future.

An enactment which provides for comprehensive vocational-technical education (49-27-107) calls for the State Department of Education to conduct a survey of vocational-technical needs during the 1973-1974 school year and to plan for the most feasible method of meeting those needs. Another statute charges the State Board of Education with the responsibility for planning vocational-technical programs (49-27-103) while more recent legislation empowers the State Board for Vocational Education to plan for and operate a statewide system of area vocational-technical schools (49-2610). Finally, the statutes creating an advisory council for vocational-technical education (49-27-201 - 49-27-202) enjoin that body to render assistance in planning for vocational-technical education. Certainly, planning is essential to the operation of educational institutions of any type. However, in regard to vocational-technical education in Tennessee, the planning function well could be inhibited by the overlap in planning responsibilities outlined above.

In two statutes, direct and indirect references to the definition and purpose of vocational-technical education are made (49-27-107, 49-2607); yet, the intended meaning of the term vocational-technical education remains unclear. It appears as though the definitions of vocational education and comprehensive vocational education are similar if not identical in nature, but in order to distinguish one from the other, concise definitions of vocational education, technical education, and comprehensive vocational education are called for.

Lastly, clarification of intent and terminology is needed in several statutes presumably related to vocational-technical students. For example, Title 49, Chapter 49 establishes and regulates scholarships originally funded by the United Daughters of the Confederacy. Such scholarships are intended for students in ". . . any institution of higher education, public or nonpublic, located in this state." However, with no written definition of higher education institution, whether this form of financial aid is available to vocational-technical students, as other forms are, is unclear.

Higher Education and Professional Education

When considering higher education in Tennessee, the colleges and universities of the Board of Regents (Chapter 32), the University of Tennessee and its Board of Trust (Chapter 33), and the Tennessee Higher Education Commission (Chapter 42) usually come to mind. However, public higher education is not limited to those institutions, nor is its regulatory legislation contained exclusively in those chapters. State technical institutes are also degree-conferring, postsecondary units governed by the State Board for Vocational Education (49-2609, 49-2610). Other chapters referring to higher education include: Chapter 34, Agricultural Extension Services; Chapter 35, Bonds of State Schools; Chapter 36, Southern Regional Education Compact; Chapter 39, Postsecondary Education Authorization Act; Chapter 40, Literary and Scientific Institutions; Chapter 50, Student Assistance; Chapter 53, Cooperative Education; and Chapter 54, Student Loan Program.

In discussing higher education legislation, particular attention will be given to the use of terminology, to areas which appear unclear or obsolete, to the general organization of statutes regarding higher education, and to the governance structure.

Chapter 32 contains legislation creating the State Board of Regents and regulating the higher education institutions under its jurisdiction. The order in which statutes are recorded causes some confusion. One would expect Chapter 32 to begin with the establishment and administration of the state university and community college system (49-3236) followed by the sequence of statutes that delineates duties, responsibilities and limitations of the Board of Regents (49-3237 - 49-3244). However, those measures appear in mid-chapter, preceded by acts dealing with several diverse topics. A reordering of the statutes within this chapter would be helpful. Here, an alteration of the code book would not adversely affect the code itself. References to state technical institutes are made in Chapter 32 (49-3215, 49-3252). The laws referring to them ought to be cross-referenced to Chapter 26 which deals with state technical institutes.

Many sections of Chapter 32 refer to areas beyond the domain of the Board of Regents; transfer of these sections to more appropriate placement should be considered. For example, the no-oath requirement section (49-3212) refers to all of education. Many other references apply to all institutes of public higher education (for example, 49-3221 - 49-3223, 49-3225 - 49-3228, 49-3232 - 49-3235, 49-3245 - 49-3248, 49-3256 - 49-3258 and 49-3264).

A similar situation exists in Chapter 33, devoted to the University of Tennessee and its Board of Trust. Donation of public land "which may provide colleges for the benefit of agriculture and mechanical arts" (49-3311) would be more adequately placed in a chapter devoted to higher education in general, since the University of Tennessee and Tennessee State University are both land grant universities. Two other statutes appear misplaced in Chapter 33. One refers to payment of debts owed to colleges, universities, and technical institutes (49-3364). The other discusses release of student directory information to military recruiting representatives (49-3380).

The authority to sell real property (49-3249) is given to "every college and university in this state" (the last paragraph of this measure states a disclaimer for the University of Tennessee). It appears a matter of debate whether this statute applies only to the Board of Regents institutions, or whether this measure also applies to the four technical institutes which are also postsecondary, but under the governance of the State Board for Vocational Education.

Moreover, several statutes relating to the Board of Regents ought to apply uniformly throughout higher education, but those enactments do not specifically include the University of Tennessee. One measure (49-3241) restricts the regents from financial interest or "procuring the appointment of any relative to any position of financial trust or profit connected with the universities and colleges governed . . . ." Such a statement ought to apply uniformly throughout state government, rather than only as a mandate to the Board of Regents. Other statutes specifically applying to the Board of

Regents and excluding the University of Tennessee include 49-3254, 49-3255, 49-3256, 49-3257, 49-3258.

In another example, permission for a student government to call for a referendum to increase activity or maintenance fees (49-3263) appears applicable to only the State University and Community College System. Yet, the issue pertains to all postsecondary students in Tennessee. Clarification is needed to determine whether this permission is extended to the other systems of higher education.

While many statutes were probably originally worded with clearly understood terminology, the passage of years has led to confusion and ambiguity in many areas of Title 49. The addition of a "definitions" section which could be updated as needed would alleviate this ambiguity.

In Chapter 42, entitled Tennessee Higher Education Commission, one statute is entitled "Rights, powers and duties of boards of education not impaired," yet, the text refers solely to the Board of Regents (49-4209). The title needs revision to more clearly reflect the content of the statute. This concern needs to be addressed more pervasively. Prior to the establishment of the Board of Regents in 1972, higher education was under the authority of the State Board of Education. Enactments applicable to higher education were written in terms of that governance structure. While authority was transferred to the Board of Regents (49-3243), several items of legislation have never been updated to reflect the change. Should the updating of those items be undertaken, care should be taken to insure the changes in the code book do not alter the code.

Chapter 32 of Title 49 refers principally to the State University and Community College System, governed by the Board of Regents. Although most references to "state colleges and normal schools" have been deleted, the chapter title remains obsolete, in need of revision. The title "State Universities and Community College System" would be more appropriate. Additionally, obsolete references to the state universities as colleges (e.g., Austin Peay State College) should be corrected.

A search of Title 49 yields little reference to mission or purpose of institutions or governing boards. The University of Tennessee is generally understood to be established with a statewide higher education mission, while the Board of Regents system was established to serve regional needs. Today, both systems maintain campuses across the state, and now both have comprehensive universities.

The only reference to "functions" that can be found in Chapter 32 refers to the function of Tennessee State University to operate "as the 1890 land grant institution of the state pursuant to federal laws" (49-3206). No other specific college or university or group of institutions has any reference to function. The "powers" of the Board of Regents are outlined in "Board of Regents-Powers-Limitations" (49-3239). These powers include prescribing curricula and requirements for diplomas and degrees, setting policies for fiscal affairs, establishing policies and regulations regarding campus life, accepting donations on behalf of their institutions, purchasing land, and any other such power "as is authorized for the board of trustees of the University of Tennessee."

No reference within this statute delineates the mission, purpose, function or power of the Board of Regents as differing from the Board of Trustees of the University of Tennessee. Without such distinctions clearly understood, the two boards could be viewed as competing in the field of higher education, rather than as cooperating. The total body of higher education should be unified and consistent with a statewide plan for higher education.

Miscellaneous Regulations

The relevance of two of the miscellaneous regulations is questioned. One law, forbidding the employment of aliens as teachers in Tennessee (49-1303), should be reconsidered in light of State Attorney General rulings. Another law which guarantees an individual's right to select a physician (49-228) seems to be totally out of context with all other educational legislation.

Finally, the errata encountered while reviewing Title 49 are mentioned as follows:

Under the duties of the Commissioner of Education (49-105), the phrase ". . . the Department of the State Board of Education . . ." (line 31) makes no sense and should be rewritten.

The statutory title of 49-117 should read ". . . Board to set score" (line 2).

The measure detailing judicial review of teacher dismissals (49-1417) includes a redundant "so so" (line 23).

The term "section" in 49-40-105 (line 5) should be "selection."

In the statute prescribing terms of membership for the Tennessee Higher Education Commission (49-4205), line 37 should prohibit "employees" of public institutions not "employers" of public institutions from commission membership.

Lastly, while not a misspelling, the term "capitol" is now used inappropriately in two measures (49-104, 49-106).

III. SUMMARY

In the preceding pages, a number of concerns have been outlined pertaining to the legislative enactments by which public education is governed in Tennessee. Comments may have seemed random and directed more toward structure than substance. However, such a presentation constitutes an accurate reflection of the state of educational law in Tennessee. For the most part, school-related statutes make adequate provision for the programs they stipulate. Yet, numerous acts suffer from minor flaws leading to some overriding and general areas of concern which are summarized herein.

Organization is a two-fold problem with educational law in Tennessee. On the one hand, the organization of Tennessee Code Annotated, Title 49 leaves much to be desired. On the other hand, and of much greater concern, is the fact that the present organizational structure of public education as set forth by law leads to confusion regarding institutional purpose and legislative intent as well as to overlap regarding governance of educational facilities.

As presently codified, related measures are interspersed throughout the chapters of Title 49. For example, discipline is both title and topic of Chapter 9. Yet, a statute delineating the procedures to be followed in student suspension appears in Chapter 13. Clearly, suspension is an act directly related to student discipline. However, not even a cross-reference note links the suspension law to the discipline acts. Conversely, the several duties of principals which are contained in Chapter 9 have no reference notes to direct the reader to other duties of principals spelled out in Chapter 13.

Another problem of codification regards the inclusion of general legislation within chapters addressing a specific topic. In both Chapter 32, State Colleges and Normal Schools and Chapter 33, University of Tennessee, statutes are found which deal with all higher education institutions rather than only those schools designated in the chapter titles. A similar situation exists where state technical institute legislation is recorded in Chapter 26 which contains area vocational-technical school measures. In regard to the former situation, a new chapter for higher education in general might be structured.

A third Title 49 problem area has to do with terminology and intent. Existing statutes should be reviewed and revised to remove obsolete references such as "Austin Peay State College," or "state normal schools." As a part of such review, measures should be considered regarding the types and levels of schooling for which the laws were written. Laws addressing matters common among all types of schools should not be written in terms applicable only to elementary education. Additionally, legislators should continue to include clear statements of intent when drafting proposed bills.

A formal and comprehensive reorganization of Title 49 should be conducted. Emphasis should be placed on more carefully aligning statutes by specific topic rather than by general chapter headings, on updating terminology to reflect status changes, and on expanding the woefully inadequate index to Title 49. Additionally, a plan for consistently and readily editing or amending statutes which are changed by new legislation should be developed.

On a larger scale, the organizational structure of Tennessee education should be evaluated, particularly in regard to the governance of higher education and vocational-technical education. Statutory provisions place both of those types of educational programming under at least partial jurisdiction of more than one governing board. Such an arrangement may lead to cost inefficiency, overlap of services, conflict in planning and implementation, and needless competition. Moreover, multiple board governance may lead to a confusion of roles and responsibilities among boards, the body that establishes them, and the agencies they govern.

The matter of policy-making should be included in any review of educational governance. Policy statements provide the framework for organizational operations. In regard to public education, state law is the foundation on which the policy framework is built. Normally, law precedes policy, stating an intended outcome or defining a desired change in the human condition. Policy statements refine the notion of the sought after goal and stipulate limits on the means to be employed in achieving it. Procedural rules and regulations set forth the process for obtaining the end. In order to foster the proper functioning of educational organizations, governing agencies must communicate among themselves. Also, coordination of law, policy, and procedure must be achieved. Governing boards should record their policy statements in clear concise terms. Additionally, references to law(s) on which policies are founded as well as to rules which are derived from those policies might be appended to policy statements in order to provide a comprehensive presentation of governance matters. Finally, policy statements and legal references should be collected into one body--a policy manual organized by topic and adequately cross-referenced and indexed. Most boards of educational governance in Tennessee currently maintain a manual of policy. Continual review and update of those manuals should be carried out.

The status of educational law and the status of educational programming parallel each other in Tennessee. Both seem basically sound; yet, both could be improved. Law is the shaping force for school governance, and governance is the patternmaker for programming. Thus, a well-ordered, current, and comprehensive body of legislation should lead to a governance structure that provides for educational programming as a total, unified experience for the betterment of all Tennesseans.

CHAPTER FOUR

KINDERGARTEN THROUGH GRADE TWELVE

I. INTRODUCTION

The charge to the K-12 Subcommittee was similar to that given other components of the study. Basically, their task was to assess the present state of elementary and secondary public education in the state, to identify any problem areas, and to make short-term and long-term recommendations directed toward improving public education in kindergarten through grade twelve statewide. To accomplish this formidable task within the time period allowed, the Subcommittee focused on certain key areas where the greatest need appeared and hope for improvement might be found. The areas of inquiry identified by the K-12 Subcommittee followed the general outline of the entire study, and the findings in each area are discussed within the chapter as follows: II. The Goals of Public Education, K-12; III. The Governance and Organization of K-12; IV. The Quality of Academic and Special Education Programs for K-12; V. Financing the Public Schools, K-12; and VI. Utilization of Facilities.

All of the techniques described in Chapter One were utilized to gather data on the various topics. Besides personal testimony and available statistical data, the primary source for firsthand data was the Public Education Survey, Grades K-12, also described in Chapter One. To ensure valid interpretation of the survey responses, various tests were performed on the

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data. Total frequency, frequency by groups, consensus, and mode were analyzed. An analysis of variance was performed to determine if the responses of different groups had significant differences. Enough similarity was found in the responses to allow for collapsing the initial ten survey frames into four main groups as follows: Group 1, teachers; Group 2, principals and supervisors/coordinators of instruction; Group 3, superintendents, local board chairmen, and State Board members; and Group 4, parents. Following the collapsing or combining of the groups, appropriate tests were performed to measure differences in the responses and to compare responses among the groups. Thus, differences in opinion on particular questions could be noted and evaluated accordingly.

At the end of the chapter is a list of recommendations that were approved by the K-12 Subcommittee. Realizing that wide variations occur in public education for kindergarten through grade 12 throughout the state, the Subcommittee hopes that these recommendations will be helpful to state and local officials, as the case may be, in making decisions concerning the future of Tennessee's public educational system.

II. THE GOALS OF PUBLIC EDUCATION
KINDERGARTEN THROUGH GRADE TWELVE

The Changing Role of Education

The goals prescribed for public education vary frequently with social and economic changes. As a public institution, the school is both producer and product. Charged with the responsibility of helping produce future citizens, schools are, by and large, the result of what the people want and are willing to pay for at different times. As a result, the role of the public school has changed since its beginning, particularly in the last thirty years. The public school, as we know it, is a relatively new creation.

Belief in an enlightened electorate is fundamental in a democracy, but a still more powerful concept has influenced education in this nation. Inherent in the American ideal of "equal educational opportunity" is the belief that education is the avenue to success and upward social mobility. Historically in America, success has been equated with economic gain. Probably only in a bountiful country such as ours could education have captured the mind and imagination of the people to such an extent.

An interesting theory concerning the relationship between education and the society of abundance has been offered by Michael J. Bakalis:

> The closing of the physical frontier in America could have had grave consequences for the social fabric of the nation. But it was here that education came to the rescue, for the schools became the new frontier of hope. It was the schools that were to make possible the American dream of having a share of the abundance that blessed the nation. One needed only to be educated, or at least trained, to fit into the new economic equation (1981, 9).

The schools responded to this challenge in three ways: (1) "they actually did educate and train people to participate in and give direction and growth to the economic system"; (2) they "became a key determinant in deciding who would get what" by formulating policies, either deliberately or innocently, that excluded certain groups from "their share of the economic pie for longer periods of time"; and (3) the educational system became "the regulator for the industrial machine" by setting credentials and by "increasing educational requirements for entrance into the economy". Increasingly, the school appeared not only as the "chief vehicle to acquire success," but as the "basic cause of the affluence of the nation." Thus, education became "further ingrained in the American faith and was further solidified in the public mind as the panacea for all the nation's economic and social ills" (Bakalis, 9).

This analysis of the relationship between education and our economy may shed some light on the changing role of the school during the past thirty years from an institution primarily educational in purpose to an agent of social reform. Education has been perceived not only as the avenue to success, but also as the cure-all for society's ills. This all abiding faith in education peaked in the mid-1960s when the school "was conceived as the prime instrument of individual self-realization, social progress, and economic prosperity . . ." (Husen, 1979, 9).

John Goodlad characterized education as "the long, slow answer to civilization's problems," but "(b)ecause too many people expected too much too soon from our schools, disillusionment set in" (1979, 20). Donald P. Mitchell reiterated this condition when he said:

> The larger troubles of American society are reflected in our schools. They have, in fact, overwhelmed the schools. There has been a tendency to blame the school for all of our ills. . . . The problems of our society and our schools were not created by the schools. What has actually happened is that we have placed new and heavier burdens on our system of public education (1979, 5-6).

There is no doubt but that the mission of the schools has changed and that it is in need of serious reexamination. In response to this critical need, Goodlad further stated:

> If you want to really eliminate unemployment, you create jobs. If you want to really eliminate the slums, you clear up the slums, but you don't hold education responsible for getting it done. . . . Because education is a long-term answer to mankind's problems and not a short-term one, we must very carefully, at all levels of educational decision making, differentiate between what education can do in the long run and what human engineering can do in the short run (1970, 7).

If our nation is truly entering what some economists perceive as a conservative phase (a time of struggle to sustain economic activity and to emphasize a return to traditional values), it becomes even more imperative that we understand the cause-and-effect relationship between our economy and education (Forrester, 1980, 5). Also, during such a period of retrenchment, it is essential that all citizens agree on what the goals of public education should be.

The Proper Role of Education

Interestingly, in spite of a seemingly widespread lack of public confidence in the schools, the most recent Gallup Poll reported that every major group of the population placed "education first, our industrial system second, and military strength third in the importance assigned to each in determining America's future place in the world." Similarly, when asked, "How important are schools to one's future success--extremely important, fairly important, or not too important?" four of every five persons interviewed said "that education is extremely important to one's future success." All agreed on the importance of education--"rich and poor, old and young, well educated and poorly educated" (Gallup, 1982, 46). It appears that the long-standing, American faith in education is alive and well, but the question is: "Faith in education to do what?"

There are three questions one must pose in attempting to arrive at the proper role of public education:

1. What are schools expected or asked to do?
2. What do schools do?
3. What should schools do? (Goodlad, 1979, 2).

Under the first question fall the goals of public education, articulated or otherwise. Most of the goals established by state legislatures, state education agencies, or local boards are educational and generally fall into four categories: (1) academic, (2) vocational, (3) social and civic, and (4) personal (Goodlad, 1979, 44). Personal goals are the most recently developed of the four types. Some goals for public education are not spelled out specifically, but are built into the system "through specifications of guidelines for the expenditure of state and federal funds" (Goodlad, 1979, 3). Some goals are unarticulated and merely reside in the minds of persons interested in education.

The second question relates to the functions of schools which are generally social, educational, or both. Helping eliminate unemployment, poverty, and war (goals prescribed for the schools in the 1960s) were examples of social functions that were noneducational. Since schools are judged primarily by educational criteria, they should assume only those social functions "that are most readily converted to educational goals" (Goodlad, 1979, 22). This leads to the third question: "What should schools do?"

Lawrence Cremin stated that "intellectual training may not be the only function of the schools, but in the last analysis it is their raison d'etre" (1961, 344). In his book, The School In Question, Husen referred to Carl Bereiter's definition of a school:

> Instead of aspiring to be an All-Educator the school has to be reduced to what it was set up to be: an institution that first and foremost provides the basic skills and knowledge with the help of which young people can acquire the additional competence needed in order to get along in adult life (5).

The Paideia group, composed of seventeen prominent educators who examined public education for two years, found that the objectives of elementary and secondary education should correspond to three aspects of the common future which all children share. Basic schooling in K-12 should help each individual to make the most of himself and his life, must do everything it can to make students future good citizens, and must prepare young people for the world of work but not by training them for a specific job (Adler, 1982, 17-18).

In a recent editorial for a local newspaper, Athens Clay Pullias stated:

> The purpose of education is to teach young people to learn, think, calculate, solve problems and develop the will to do his or her best in life with whatever talents and opportunities each may have. Given that foundation intelligent young people will become self-propelling, self-directed and fully capable of coping with whatever life may bring (1982, 5-B).

Certainly, a strong consensus concerning the academic role of public schools seems to be emerging in the 1980s.

Tennessee State Board Goals of Public Education

In 1973-74 the State Board of Education established ten general goals of public education for local education agencies (LEAs) to follow in their curriculum planning. Under each goal are listed learner objectives designed to be used in defining the degrees of achievement expected for individual or groups of students. The learner objectives developed to meet the goals are supposed to serve as the basis for a system of accountability for each LEA.

These goals were established after a year long intensive study in 1972 by an in-house committee of the State Department of Education. Statewide surveys were conducted and input from the grass roots level was sought before the goals were adopted. The goals were purposely made broad to allow local systems freedom in setting learner objectives. The State Board goals are as follows:

Every Person Should:

- (a) HAVE COMPETENCE IN THE FUNDAMENTALS OF LEARNING AND COMMUNICATION.
- (b) DEVELOP SKILLS AND ATTITUDES WHICH FACILITATE LEARNING.
- (c) HAVE SUFFICIENT INFORMATION TO REALIZE HIS/HER LIFE GOALS.
- (d) KNOW THE PRINCIPLES, HABITS, AND ATTITUDES CONDUCIVE TO GOOD PHYSICAL AND MENTAL HEALTH.
- (e) ESTABLISH AND MAINTAIN SATISFACTORY RELATIONSHIPS WITH OTHER PERSONS.
- (f) KNOW AND PRACTICE THE BASIC REQUIREMENTS OF RESPONSIBLE CITIZENSHIP.
- (g) HAVE COMPETENCE IN THE USE OF NATURAL RESOURCES AND IN THE MAINTENANCE OF ECOLOGICAL BALANCE.
- (h) ACQUIRE CAREER INFORMATION AND ECONOMIC COMPETENCE.
- (i) APPRECIATE CULTURAL AND AESTHETIC VALUES.
- (j) BE AWARE OF THE INCREASING INTERDEPENDENCE AMONG PEOPLE AND NATIONS OF THE WORLD (Tenn. State Board, 1979, 2-7).

These goals are intended to serve as the foundation for the curriculum required by the State Board and any additional courses approved by the Board.

Goals for K-12 for the 1980s

As ten years have elapsed since the present goals for public education were set by the State Board, a goal ranking process was included in the statewide educational survey. The process was designed to find out what parents and educators perceive as the most important goals for elementary and secondary schools. A list of twenty commonly recognized goals was included in the K-12 questionnaire, and respondents were asked to rank the importance of each goal as highest, high, medium, or low. In addition, those persons surveyed were asked to check the ten goals they believed most important for K-12 in Tennessee. The list included goals established by Phi Delta Kappa, the Southern Association of Colleges and Schools, and the State Board of Education. The twenty goals listed in the questionnaire were as follows:

1. Develop skills and attitudes which facilitate learning.
2. Have sufficient information to realize his/her life goals.
3. Know the principles, habits, and attitudes conducive to good physical and mental health.
4. Establish and maintain satisfactory relationships with other persons.
5. Know and practice the basic requirements of responsible citizenship.
6. Have competence in the use of natural resources and in the maintenance of ecological balance.
7. Acquire career information and economic competence.
8. Appreciate cultural and aesthetic values.
9. Be aware of the increasing interdependence among people and nations of the world.
10. Have competence in the fundamentals of mathematical concepts, principles, and skills.
11. Learn how to respect and get along with people who think, dress, and act differently.
12. Learn about and try to understand the changes that take place in the world.
13. Develop skills in reading, writing, speaking, and listening.
14. Understand and practice democratic ideas and ideals.
15. Understand and practice the skills of family living.
16. Develop skills to enter a specific field of work.

17. Learn how to use leisure time.
18. Develop pride in work and a feeling of self-worth.
19. Develop good character and self-respect.
20. Gain a general education.

All four groups--teachers, principals/supervisors, superintendents/board members, parents--overwhelmingly selected goal 13, "Develop skills in reading, writing, speaking, and listening," as their first choice; 89.7 percent of the total responding saw this goal as of highest importance and 98.8 percent designated it as of high or highest importance. The second most important goal chosen was "Develop skills and attitudes which facilitate learning," with 73.9 percent of all groups perceiving it as of highest importance and 95.6 percent considering this goal of high or highest importance. Six other goals (numbers 4, 5, 10, 18, 19, and 20) were also ranked very important with over 85 percent of the respondents perceiving these goals as of high or highest importance. The next most positive agreement among all groups was found for the goals numbered 2, 3, 11, and 14 with 70-84 percent of all respondents selecting these goals as of high or highest importance. Thus, strong consensus was evidenced by the total survey population for eleven of the twenty goal statements. Ranked in order of importance, the eleven goals were:

1. Develop skills in reading, writing, speaking, and listening.
2. Develop skills and attitudes which facilitate learning.
3. Develop pride in work and a feeling of self-worth.
4. Have competence in the fundamentals of mathematical concepts, principles, and skills.
5. Develop good character and self-respect.
6. Gain a general education.
7. Know and practice the basic requirements of responsible citizenship.

8. Establish and maintain satisfactory relationships with other persons.
9. Know the principles, habits, and attitudes conducive to good physical and mental health.
10. Have sufficient information to realize his/her life goals.
11. Understand and practice democratic ideas and ideals.

An analysis of the goal-rankings by the four combined groups (teachers, principals/supervisors, superintendents/board members, and parents) revealed considerable similarity among the groups and the combined group ranking (average of the four groups) although the rankings were not exactly the same as when ranked by the total group (see Table C-2 in Appendix C). All four groups chose as number 1, "Develop skills in reading, writing, speaking, and listening," and as number 2, "Develop skills and attitudes which facilitate learning." After that, some slight differences occurred within the groupings, but there was strong enough agreement among all four groups so that individual rankings were not more than two places different from the combined or total ranking for the top eleven goals. The only exception to this was the goal statement, "Have competence in the fundamentals of mathematical concepts, principles, and skills," which was ranked third by the combined groups, fourth by the total group, and sixth by parents (see Table C-1 in Appendix C).

Respondents were also asked if they agreed or disagreed with the following statements:

1. The State Board of Education should set broad educational goals to be followed by school systems across the state.
2. Within the context of broad statewide goals, each local board of education should set specific educational goals.
3. The State Department of Education should require periodic evaluation of each school system's progress toward statewide and local educational goals.

All groups overwhelmingly agreed or strongly agreed with all three statements. A total of 93 percent thought the State Board should set broad educational goals; 93.5 percent felt that local boards should set specific educational goals; and 90.4 percent believed that the Department of Education should require periodic evaluation of each system's progress toward established goals.

An open-ended question was included in the statewide questionnaire and respondents were invited to make any comments or suggestions concerning public education in Tennessee. A few of the comments pertinent to the goals of K-12 are included below:

> Educators and the public must agree upon the goals and objectives of education.
>
> The primary function of school should be acquiring knowledge and this should not be sacrificed.
>
> We need to be consistently good and set our goals high.
>
> There is no substitute for a good secondary education and I support all goals to that effect and an equal opportunity for all children to this end.
>
> I think definite goals should be established statewide.
>
> I feel education of grades 1-12 should be a very basic one, that would equip an individual with the tools to educate himself.

Conclusions

It appears that Tennesseans, parents and professionals both, think that goal setting for K-12 is important at the state and local level and that established goals should be evaluated. Also, the consensus is that the primary goals for elementary and secondary schools in the 1980s should be academic, personal, and social or civic in nature. Tennesseans agree that basic schooling should prepare students for the future by providing the fundamental education and skills needed for lifelong learning; by developing positive self-concepts, healthful habits and attitudes, and moral character; and by training them to assume responsible roles in our democratic society.

III. THE GOVERNANCE AND ORGANIZATION OF KINDERGARTEN THROUGH GRADE TWELVE

A. Governance of the Public Schools

The legal responsibility for establishing and maintaining a system of public schools is delegated to the General Assembly by the Tennessee Constitution. Court decisions have held further that the "*control* of public schools is a function of the general assembly" [Leeper v. State, 103 Tenn. 500, 53 S.W. 962 (1899)]. Since the U.S. Constitution does not directly address the question of responsibility for education, all states have assumed this role, but the degree of state versus local control varies widely among the fifty states. Traditionally in Tennessee, the state has enacted rules, regulations, and minimum requirements for local systems to follow, but has left much of the administration of the schools to local education agencies (LEAs).

State Level

At the state level, the administration and governance of the public schools are vested by the General Assembly in the Commissioner of Education and the State Board of Education (SBE) of which the Commissioner serves as Chairman (T.C.A. 49-102, 49-105, 49-108). Since the State Board of Education is ex officio the State Board of Vocational Education, the Commissioner is also the chief executive for vocational education (T.C.A. 49-107). In addition to secondary vocational programs, this responsibility encompasses twenty-seven area vocational schools (primarily postsecondary) and four postsecondary technical institutes. The State Board is also the governing body for the four state special schools: Tennessee Preparatory School, Tennessee School for the Blind, Tennessee School for the Deaf, and the Alvin C. York Institute (T.C.A. 49-112).

Duties of the Commissioner and the State Board

The State Board is required by law "to prescribe rules and regulations for the approval and classification of all public schools, grades kindergarten through twelve (12) . . .; to make regulations for their government; to prescribe curricula and to approve courses of study adopted by local boards . . ." (T.C.A. 49-108). As the chief state school officer (CSSO), the Commissioner has many responsibilities in carrying out State Board rules and regulations; among these are: providing required forms to local systems, collecting and publishing school data, appointment of Department of Education (DOE) personnel, preservation of official educational documents, requiring reports of LEAs, submission of reports to the Comptroller and the Governor annually, execution of all school laws, and approval of private schools that request state approval (T.C.A. 49-105). He is authorized to grant waivers to schools which do not comply with state regulations (T.C.A. 49-116) and must publish annually a list of all waivers granted [T.C.A. 49-603 (E)].

In addition to his many duties as the CSSO, the Commissioner is a member of the Governor's cabinet and serves ex officio on numerous boards. As the chief spokesman for public education, the Commissioner is often requested to address groups throughout the state.

In terms of numbers, the responsibilities of the Commissioner are even more staggering. During the 1981-82 school year, 147 school systems enrolled 831,854 students in 1,682 public schools in Tennessee. The instructional staff for these schools totaled 46,276 with 139 full-time superintendents, 410 full-time assistant superintendents, and 969 board of education members. The state budget alone for these schools for 1982-83 is approximately $700,000,000.

The Department of Education

The State Board, by law, is associated with the Department of Education for administrative purposes, and the Commissioner serves as the chief executive officer for the Department and all of its divisions (T.C.A. 49-107, 49-110). In this capacity, the Commissioner is responsible not only for the supervision, direction, and control of those divisions directly or indirectly serving LEAs, but also for Teacher Certification, Adult-Continuing Education, Veterans' Education, Vocational Rehabilitation, some CETA programs, and Educational Television.

At the present, the Department of Education has a total of 3,596 authorized staff positions (6.74 percent of which are vacant). However, only 459 of these work directly or indirectly with K-12 programs (see Tables C-3 and C-4 in Appendix C). The historical growth of the DOE from 43 staff members in 1930, 140 members in 1950, 1,139 members in 1967 to the present closely parallels increased state and federal spending for education and increased enrollment in the public schools. The largest growth in personnel occurred during the 1960s and early 1970s with the enactment of federal programs affecting education at the state and local levels (Tenn. Dept. Educ., 1969, 31-32).

Historically, the Department has provided "leadership in planning, research, consultative services, public relations, and in-service education" (Tenn. Dept. Educ., 32). In addition it performs certain regulatory functions assigned to it by federal regulations, the General Assembly, the State Board, or the Commissioner. Direct contact with local schools is maintained through nine service centers across the state which aid local system personnel in planning and implementing programs. The field services of the DOE were reorganized in 1981 to place stronger emphasis on leadership and service roles for the nine center teams and to provide for regulatory and monitoring activities by three regulatory teams.

The K-12 statewide public education survey included several questions concerning the Department of Education. Five functions of the Department were listed, and respondents were asked to rank them from very high to low importance. Overall, the functions ranked in order of importance were as follows:

1. advisory capacity to local education agencies
2. program evaluation and research
3. leadership for local education agencies
4. regulatory agent for local education agencies
5. monitoring agent for local education agencies.

By groups, principals/supervisors and superintendents/board chairmen ranked "advisory capacity" higher than teachers or parents; whereas, parents ranked "program evaluation and research" higher than any other group. All groups ranked "leadership" of medium to high importance. Parents, also, thought "regulatory" and "monitoring agent" were more important than did the professionals. When asked if local systems receive adequate assistance from state personnel in implementing new programs, 60 percent of the educators agreed and 40 percent disagreed. Educators were asked if they would like to see inservice workshops conducted by state personnel increased, stay the same, or decreased. Responses by the total group were: 44 percent--increased, 41 percent--stay the same, and 14 percent--decreased. Fifty percent of the principals and supervisors indicated they would like to see them increased. All educator groups--teachers, principals, supervisors, superintendents, and board chairmen--overwhelmingly agreed there were too many state and federal regulations involving extra paperwork for teachers and principals.

Qualifications and Selection of the Commissioner and the State Board

Since 1873, the Commissioner has been appointed by the Governor. He is required by law to "be a person of literary and scientific attainments and of skill and experience in school administration" who is qualified to teach in the highest level school under his jurisdiction (T.C.A. 49-103). Many qualified and able men have served as Commissioner, but considering the preceding brief description of the enormous responsibilities entailed in the position, it is not surprising that Tennessee has had six different Commissioners since 1971.

The State Board, which is a lay board, is also appointed by the Governor. It has twelve appointed members, four from each Grand Division of the State, who serve nine-year overlapping terms. The two leading political parties must be represented by at least three members each. The Governor, the Commissioner (as chairman), and the executive director of the Tennessee Higher Education Commission, who is a non-voting ex officio member, make fifteen members.

Tennessee is one of five states at the present that have the CSSO and the SBE both appointed by the Governor (Maine, New Jersey, Pennsylvania, Tennessee, and Virginia). A recent article, which compared Tennessee's present state governance structure with other states, pointed out trends in the selection of the CSSO and SBE nationwide and cited the advantages and disadvantages of different selection methods (Achilles, 1982). Salient points are summarized in the following paragraphs.

Chief State School Officers are generally chosen three ways: by popular election statewide, appointment by the State Board or some other board, or appointment by the Governor. At the present, in 17 states the CSSO is elected by popular vote; in 28 states, he is appointed by the State Board, and in 5, by the Governor. "Using data from 1960 to the present, there emerges a trend toward appointment of the CSSO by the SBE (or other representative Board) and away from both election by popular ballot (from 35 to 17) and appointment by the Governor (from 14 to 5)" (Achilles, 3).

State Boards of Education are usually selected three ways: by popular election, appointment by the Governor, or by ex officio means. Currently, the SBE is elected in 12 states, appointed by the Governor in 32 states, and is ex officio in 2. In Washington state, local school boards elect the SBE; in New York, the state legislature appoints the Board of Regents, which governs both higher education and K-12; and in North Carolina, the SBE is appointed by the Governor and approved by the legislature. Trends in selection of the SBE are not as definite as they are for selecting the CSSO (Achilles, 5).

Educators and political scientists tend to favor election of the State Board by the people on a nonpartisan ballot and selection of the CSSO by the

State Board, and disapprove of appointment of both by the Governor. The reason for the latter is obvious; appointment of both by the Governor can be the most politically susceptible method. The chief arguments used for popular election of the SBE are that the Board is truly representative of the people and an elected Board can command the political prestige associated with obtaining office by this method. Further, if elected on a strictly non-partisan basis, the SBE is free from political pressures. Arguments against this method include the difficulty in getting qualified people to run for the position and the amount of time consumed by a statewide race (Achilles, 5-6).

Selection of the Chief School Officer by the State Board is favored by professionals for a number of reasons. This method can assure selection of a highly qualified administrator from a wide number of candidates; the CSSO serves at the pleasure of the Board and not the Governor; the position is not subject to political change; the CSSO can establish educational programs on a long-range basis; and more continuity and unity of mission is possible in the personnel of the state education agency and in long range planning (Achilles, 6-7).

The statewide K-12 survey included questions on these issues. A definite trend toward popular election of the State Board was observable with 77 percent of the total group selecting election as opposed to 14 percent favoring appointment by the Governor. The rankings were as follows: popular election from the Congressional Districts--35.1 percent; popular election from the three Grand Divisions of the State--27.7 percent; popular election statewide--14.6 percent; appointment by Governor--13.7 percent; and election by General Assembly--8.9 percent. Even though all groups favored popular election by some method, approximately one-fifth to one-fourth of the principals/supervisors and superintendents/board members favored the current method of appointment by the Governor.

The consensus on selection of the Commissioner was not as clear-cut; 31 percent thought he should be appointed by the State Board; 26 percent, appointed by the Governor; and 25 percent, elected statewide. Only 12 percent thought the local superintendents should elect the CSSO and 6 percent thought he should be chosen by the General Assembly. Among the different groups, more administrators favored the status quo than parents or teachers, who generally preferred appointment by the State Board or popular election.

Local Level

Governance of the public schools at the local level is vested by law in a local board of education and a superintendent or director (T.C.A. 49-102). State law mandates duties of local boards and gives them certain discretionary powers (T.C.A. 49-214, 49-215). Chief among these duties is management and control of the public schools under their jurisdiction. Duties of superintendents are also listed by statute, among which is the responsibility for seeing that all school laws are faithfully executed (T.C.A. 49-224). Even though in many cases the superintendent is not an employee of the school board, the courts have held that: "The county board of education is the supreme authority in school matters within the county, and the superintendent of schools is subservient to the board" [Howard v. Bogart, 575 S.W. 2d 281 (Tenn. 1979)]. Particularly in matters of hiring or discharging school personnel has the board's authority been ruled supreme.

Qualifications For Superintendents and Local Board Members

Qualifications for both superintendents and board members are set by state law. Superintendents must be "persons of literary attainment and experience in the art of teaching"; must hold a "professional certificate with endorsement as principal and/or supervisor of instruction"; and must have a Master's degree in educational administration" including specific study areas (T.C.A. 49-220). Board members must be residents of the county; cannot be members of the quarterly county court; must possess "recognized integrity, intelligence, and ability"; and "have a practical education" (T.C.A. 49-209).

Selection of Superintendents and Local Boards

As previously stated, there are 147 school districts in the state; 16 of these are special school districts, 36 are city districts, and 95 county. The boards and superintendents of these districts are chosen by varying methods. Membership on the local boards and length of terms vary widely, also. The following breakdown illustrates these variations:

Boards of Education

A. County Boards

17	appointed by County Commission
78	elected by popular vote

B. City and Special School District Boards

17	appointed by City Commission
32	elected by the people
3	selected by a combination of the two above

Superintendents

A. County

12 appointed by County Commission

80 elected by popular vote

3 appointed by board of education

B. City and Special School Districts

52 (all) appointed by board of education

In total, 110 school boards are elected by popular vote, 34 are appointed by commissions; and 3 are a combination of election and appointment. As for the superintendents, 80 are elected by popular vote, 55 appointed by boards of education, and 12 by county commissions. In 70 counties, both the superintendent and local board are elected by popular vote. The number of members on local boards varies from 3, 4, 5, 6, 7, 8, 9, 10, to 12, with 7 being the most popular number. The length of terms for board members varies from 1 year up through 7 years, with the majority serving 6 year terms. In 13 districts, the members' terms are concurrent, but are staggered in all others (TSBA, 26-28).

Since the majority of the local boards of education are elected by the people in Tennessee, the chief controversy centers around the elected versus the appointed superintendent. Educational researchers have generally favored the appointed method over popular election for a number of years (Kimbrough and Johns 1963, Graves 1932, Cubberley 1929). Arguments for both methods were synthesized by Leps and are summarized as follows:

Arguments For Election of Superintendent

1. The public maintains control of the schools through exercise of their rights to the ballot. (Schools should remain close to the people.)
2. An elected superintendent is likely to be more responsive to the people's needs and desires than an appointed one.
3. Influentials in the county are more likely to affect the decisions of an elected superintendent in matters of county welfare.
4. Elected superintendent is more independent of the school board.
5. Appointment of the superintendent gives boards more power over the schools (Leps, 1968, 17-18).

Arguments For Appointment of Superintendent

1. School board is able to select a better qualified person than the electors of the school district.
2. The time and efforts of the superintendent can be spent in doing the educational job.
3. Appointed superintendents are more likely to work cooperatively with the board and the staff.
4. The schools are really closer to the people when they can hold the elected school board completely responsible for the schools (Leps, 12-16).

A recent doctoral dissertation which investigated perceived differences in the administration of school districts in Tennessee under appointed or elected superintendents is of interest:

> The findings of this study revealed that the appointed superintendent is perceived as being superior to the

> elected superintendent in many ways. The superintendents who had been appointed by school boards in Tennessee were better educated, had more experience to help them on the job, and were generally older than their elected counterpart. They were also more frequently evaluated by the school board. Board-appointed superintendents were perceived to be superior in the areas of training and experience; leadership; organization; handling of curriculum, personnel, budget, and building maintenance. The total educational community consistently rated the appointed superintendent superior in all areas of his/her operation. Lay persons serving under all types of superintendents rated their superintendent higher in all areas than did professionals. This study shows very clearly that the appointed superintendent has greater stability in office, superior training, and is more cognizant of education needs in his/her district. The findings of this study do not support the assertion of stronger public relations of those who favor electing their superintendent. The board-appointed superintendent tended to distribute his time more evenly among all concerns, rather than dwelling as much on specific concerns as did elected superintendents (Patterson, 1980, iv-v).

When asked on the K-12 Educational Survey how they thought local boards of education should be selected, the majority of all groups chose "elected by the people in the school district." This method was chosen by 73.5 percent of the entire survey population as the most appropriate. Respondents were also asked how they thought the local superintendent should be selected and responded as follows: 54 percent--elected by the people in the school district; 39 percent--appointed by the local school board; and 7 percent--appointed by the city or county commission. When the different groups were considered, the responses followed a definite pattern: the majority of the administrators favored appointment by the board and the majority of the teachers and parents were in favor of popular election.

Some comments made by respondents on the K-12 questionnaire dealt with this issue:

> Election of School Boards of Education and Superintendents: The present system allows political consideration to dominate the operation of schools. When both must run for election, the Superintendent must become a master

> politician. This eliminates qualified professionals from entering the race (Principal).
>
> In our county, I think we have too many bodies of elected officials affecting education--County Commission, School Board, and Superintendent are all elected (Teacher).

B. Organization of Schools

State law provides that a local public school system must be operated in each county and may be operated in a municipality or special school district (T.C.A. 49-102). The tradition of having three kinds of school districts reaches back to the development of the public school system in Tennessee. The fourth type of school district, unified or metropolitan, is a relatively new creation and occurred when city and county school systems merged in Nashville-Davidson County and Clarksville-Montgomery County. Since these are the only two of this type, they are generally classified as county systems.

Origin of City and Special School Districts

Historically, city schools were among the first schools in the state open, more or less, to all students within a geographical area. Background information provided by the Legislative Office of Legal Services indicates that due to the superior economic position of cities in the late 19th and early 20th centuries, cities were able to provide better schools and more advanced education for their citizens than the state was able to provide at large. Most city school systems therefore predate the establishment of the modern statewide education system which derives from Chapter 115 of the Public Acts of 1925.

The obviously superior schools in cities also attracted attention in areas of the state where state schools were poor, but cities were not large enough on their own to finance and operate school systems. It was this situation which led to the creation of special school districts which typically include a small city and the populated area adjacent to it. These districts, by concentrating more highly assessed property and denser population, were able to provide better equipped and staffed schools than the counties at large.

The movement toward consolidated schools since the 1950s, combined with increased state and local support of education, has lessened the appeal of special school districts and few have been created since the mid-1950s. The primary reasons for creation of special school districts in the last few years are control over operations and the placement of schools when the citizens in one community or area of the county believe they are being treated unfairly by the county system or the governing body, or are dissatisfied with the quality of the schools.

Many older city charters have provisions for operation of city schools and such systems are specifically preserved under Tennessee Code Annotated, Section 49-306. Special school districts must be created by a private act enacted by the General Assembly. A city system can operate its own affairs in accordance with the applicable general law, city charter provisions, and the decisions of the city school board and the city governing body. A special school system must be operated in accordance with the applicable general law and the specific provisions of the private act which created it. Any changes in the private act must be enacted by the General Assembly.

As early as 1925, the General Assembly abolished all special school districts which did not impose taxes and in 1982 enacted legislation limiting the total number of districts permitted in any county to three (3) districts in counties of 25,000 or less and six (6) districts in counties of more than 25,000 [T.C.A. 49-402 (a)(b)]. The recent act also prohibited the creation of any new special school districts after April 30, 1982, but permitted the merger and consolidation of existing districts. City districts may continue to be created under the general law, but only to the limits of three (3) or six (6) districts in a county as previously specified.

In 1981-82, there were only three counties with more than three school districts: Carroll County with six school systems, Crockett County with seven systems, and Gibson County with six. Since Gibson County and Carroll County met the population requirement for six districts, Crockett County was the only county affected by the limitation on school districts in the 1982 act.

Arrangement of Schools

This brief historical account of the origin of city and special school districts may aid in understanding the complexities and diversities in Tennessee's present public school system. Even greater diversity occurs in the grade spread found in the 1,682 public schools in the state. The chart presented below portrays the various combinations:

Grade Spread in Schools

K-2
K-3
K-4
K-5
K-6
K-7
K-8
K-9
1-2
1-3
1-4
1-5
1-6
1-8
1-12
3-5
3-6
4-5
4-6
4-7
4-8
5-5
5-6
5-7
5-8
6-6
6-8
7-8
7-9
7-10
7-12
8-9
8-11
8-12
9-10
9-12
10-12
11-12

Some of these, no doubt, resulted from school consolidations, court ordered busing, changes in school populations, or other causes. Whatever the reason, this is an example of the lack of uniformity found in the overall organization of the schools.

Four kinds of schools are defined in the Code, but some combinations of grades do not fit any of these definitions:

1. Elementary schools--schools serving any combination of grades kindergarten through eight (8) (T.C.A. 49-1002).
2. Middle schools--elementary schools designed to serve grades five (5) through eight (8) only (T.C.A. 49-1002).
3. Junior high schools--any combination of grades seven (7) through grade ten (10), but must include grade nine (9) (T.C.A. 49-1102).
4. Senior high schools--any combination of grades nine (9) through twelve (12), but must include grade twelve (12) (T.C.A. 49-1103).

State Requirements for the Organization of Schools

Some requirements for the organization of public schools are mandated by statute, others by State Board regulations. Some standards set by law are the compulsory attendance age, the length of the school term, the number of hours--daily and weekly--for kindergarten, and kindergarten entrance age. Lengths of the school day and class periods for grades 9 through 12 are set by the State Board.

Compulsory Attendance Age

Tennessee's compulsory attendance law was enacted in 1913 and was the first among the Southern states (Pearson, 1963, 12). At the present, Tennessee's compulsory school age is "between the ages of seven (7) and sixteen (16) years, both inclusive," which has been interpreted by the courts as requiring school attendance until a student reaches age seventeen (17) (T.C.A. 49-1708).

Recent debate has occurred concerning lowering the mandatory school age to 16 or 15. A comparison of attendance laws in the fifty states revealed the following data: 6 states--age 18; 8 states--age 17; 33 states--age 16; 2 states--age 15; and 1 state--age 13. Among the Southeastern states, Tennessee, Virginia, and Texas require compulsory attendance until age 17; Louisiana and Maryland, age 15; Mississippi, age 13; and all others, age 16.

On the statewide K-12 Survey, Tennesseans indicated strongly that they think mandatory attendance should be required to ages 16 or 17, with 75.9 percent selecting these ages. Fifty-two percent preferred age 17 and 24 percent chose age 16. Parents and teachers preferred age 17; whereas, the administrators were fairly equally divided between the ages of 17 and 16. Only 17 percent thought the required age should be less than 16 and only 7 percent said "no requirement." Interestingly, when asked if lowering the compulsory school attendance age would decrease school discipline problems, 67 percent of the educators agreed and 32 percent disagreed. Since principals deal more with discipline problems, they agreed more strongly with this statement than teachers, superintendents, or board members.

Required School Term

A required school term of 200 days is mandated by law with at least 175 days for classroom instruction, ten days of paid vacation for teachers, ten days of inservice training, and use of the five remaining days left to the discretion of the local board (T.C.A. 49-1709). Twenty school systems have school terms longer than 175 days and four LEAs have 180 day school terms.

Opening and closing dates for schools are left to the discretion of local boards of education and vary throughout the state. In response to Senate Joint Resolution No. 251, enacted during the 1982 legislative session of the General Assembly, a question was included in the K-12 Survey relative to school openings. Respondents were asked if they agreed or disagreed that "all schools across the state should start the Fall Term after September 1." The response was mixed. Overall, 52.8 percent of the respondents disagreed, and 47.2 percent agreed. Among different groups, the response varied. Parents (73 percent) agreed heartily, but administrators disagreed strongly. Teachers were lukewarm with 48 percent agreeing and 52 percent disagreeing. Obviously, parents think a later starting date would be more desirable, but administrators are concerned with interruptions of the school term by bad weather or other unforeseen happenings.

Kindergarten

Since 1973, Tennessee has had a public kindergarten program established by state law; however, kindergarten attendance is not mandatory. Kindergarten sessions cannot be less than four hours daily or twenty hours per week, and the term must coincide with the regular school term as nearly as possible. Children entering public kindergarten must be five (5) years of age before October 31 of the current school term (T.C.A. 49-2305, 49-2306).

At the present all school systems which operate schools have some kindergartens. These kindergartens are subject to state laws and regulations and receive state funds for their operation. A total of 54,261 pupils were enrolled in public kindergartens during 1981-82, and approximately 92 percent of all first graders had attended either public or private kindergartens.

For a number of years, attempts have been made by legislative members to enact mandatory kindergarten enrollment. All of these bills have failed for lack of adequate funding. Recent cost projections made by the Department of Education based on two different projected enrollments indicate an increased cost of $14,117,387 or $16,018,336 (state and local) for mandatory kindergarten for the 1984-85 school year, depending on the enrollment projection used. These figures do not include any additional capital outlay expenditures (see Tables C-5 and C-6 in Appendix C).

A great deal of research has been done on the effect produced by kindergarten on later achievement. The findings are mixed, but some evidence exists that the advantages of a preschool experience may persist through the eighth grade; that kindergarten may have more positive effects on the achievement of disadvantaged/low socioeconomic status children; and kindergarten "may be stronger in its effect on achievement in mathematics than on achievement in reading" (Woodruff, 1980, 5-6).

A study conducted in Tennessee in 1980 revealed a higher incidence of grade retention among students in grades 5-8 who had not attended kindergarten than among those who had. A report on the study contained the following assessment:

> Our estimate is that statewide over nine thousand more retentions have occurred among the Grade 5-8 population of non-kindergarten pupils (of 1979-80) during their school careers than would be expected if their retention rate were the same as that for kindergarten pupils. The cost of the differential retention incidence is sizeable, estimated to be nearly 2.5 million dollars annually in Tennessee. Any consideration of the costs and benefits of a compulsory kindergarten program must take into account the eventual and considerable offset in costs that is presently incurred in funding the greater-than-expected grade repetitions by pupils without kindergarten education (Woodruff, 1980, 15).

Another consideration in the present status of kindergarten education in the public schools is the lack of consistency found among their programs. This condition possibly would improve if they were compulsory statewide. Certainly more uniformity in school organization would occur.

When asked on the K-12 questionnaire if "kindergarten should be required for all children before entering the first grade," all respondents strongly agreed, with 84 percent saying "yes." Over 80 percent of the teachers and parents agreed and approximately three-fourths of the administrators thought so. The need for mandatory kindergarten was frequently mentioned by parents, teachers, principals, and supervisors in their comments on the questionnaire.

Length of the School Day

State Board regulations require a minimum length for the school day of 7 hours, grades 1 through 12. Teachers are required to be on duty the full 7 hours, but the minimum required time for pupils to be in school is 6½ hours (Tenn. State Board, 1979, 43).

A frequently heard complaint is that teachers do not have time for class preparation. Some questions included in the K-12 Survey were relative to this issue. When asked if "teachers should be required to spend 8 hours a day at school for each school day" (40 hours per week), parents, superintendents, and board chairmen agreed. On the other hand, teachers, principals, and supervisors strongly disagreed. However, all groups (87 percent) emphatically agreed that every teacher should have at least one hour for class preparation during the day. Superintendents and school board chairmen were less enthusiastic than the other respondents, but 75 percent of them agreed. This response is expected as this group would be responsible for hiring and partially funding any additional personnel needed to meet this requirement.

Conclusions

Several areas of concern were identified in the governance of K-12 at the state level. One of these has been an apparent lack of continuity in the direction of and emphasis on programs for elementary and secondary schools. The chief cause of this condition appears to be frequent changes in the Office of Commissioner of Education. Findings of the K-12 Study seem to indicate that a primary reason for this lack of continuity in the chief state school office (in addition to political reasons) is the tremendous responsibility involved in the position.

Another factor contributing to the lack of consistency in educational programs for K-12 statewide has been the lack of cohesiveness between the State Board of Education and various Commissioners. This condition does not appear to be as great a problem at the present as in some previous administrations. However, with the present method of selecting both the Commissioner and the State Board, the potential for such a situation is ever present.

From a political viewpoint, a change in the Commissioner's office is possible every four years, but in reality such changes have occurred much more frequently during the last eleven years. The nine-year term for State Board members should assure some continuity in governance and administration at the state level. Divisiveness often occurs among lay boards of any type, and strong, continuous administrative leadership is required to meld different opinions and individual personalities into a productive unit. Indecision on the part of the State Board has sometimes led to enactment of legislation by the General Assembly directed toward the administration of schools; whereas, by law this responsibility is assigned to the State Board and the Commissioner as its chairman.

Another problem area related to frequent changes in the state administration of education is a lack of unity found among divisions of the State Department of Education. Particularly is this true in the area of research and data gathering. Frequently divisions are involved in similar data collection, but there is no single information clearinghouse or data bank where the research efforts of different divisions are coordinated or combined data are available. This situation contributes to excessive paperwork at the local and state levels. Many dedicated, hard-working, highly competent people serve on the staff for the Department, but a certain autonomy exists within the various divisions that precludes the sharing of information and joint undertakings. Here again, strong continuous leadership is needed to correct this situation.

In light of the previously described conditions, viable alternatives concerning the responsibilities of the Commissioner and the State Board of Education, the selection of the Commissioner and the State Board, and functions of the Department of Education should be explored. Such alternatives should be directed toward keeping education at the state level as free from political considerations as possible and providing more continuity in the administration and governance of education at the state level.

Since the majority of the local school boards (110) in Tennessee are elected by the people and only thirty-four (34) are selected by city or county commissions, present methods for selection of local boards do not appear a major problem. However, more uniformity in the number of board members allowed per board and the length of members' terms would be desirable.

Two chief areas of concern were identified regarding school superintendents: qualifications for superintendents (T.C.A. 49-220) and the present methods of selecting county superintendents. Since the office of county superintendent is considered a county office created by the General Assembly, it can be filled only by election of the people or the county commission (Tennessee Constitution, Article 11, Section 17). As the superintendent is not a Constitutional officer, the Code contains provisions for abolishing the office of county superintendent and the employment of a school administrator by the local board of education (T.C.A. 49-234--49-237). Since this procedure is awkward and complicated, it acts as a deterrent to selection of superintendents by county boards of education.

Qualifications for certification of superintendents are set by law, but certification requirements for other educational personnel are established by the State Board of Education and the Division of Certification. A question arises as to the validity of such a practice without allowing for upgrading of such qualifications, as needed, by the State Board.

An examination of the organization and arrangement of the 1,682 public schools in the 147 school districts in the state revealed wide variations. Some of this diversity may be the result of conditions beyond the control of either the state or the local education agency, but a concerted effort should be made to provide more uniformity in both the grade arrangement and organization of schools. Some modifications could be effected by local administrators; others would require changes in state mandates.

IV. THE QUALITY OF EDUCATIONAL PROGRAMS
IN
KINDERGARTEN THROUGH GRADE TWELVE

A. Quality in Regular Academic Programs

> Quality is almost certainly going to turn out to be the foremost national education concern of the 1980s, much as equity was the premier issue of the 60s and 70s (Finn, 1981, 21).

Concern for quality in education can be observed from the national level with the creation of the National Commission on Excellence in Education down to the state level with activities by state legislatures, state education agencies, and local boards of education directed toward raising the standards for public schools (Pipho, 1982, 5). Most of these efforts are focused on improving academic achievement at all levels of education with particular emphasis on improving the mastery of basic skills during the elementary and secondary grades.

A major reason for this widespread movement is national concern about the public image of education. For the last decade or so, the public schools have experienced "a loss of credibility, prestige, and public confidence" (Weiler, 1982, 9). The most frequently cited documentation for this trend is the "Gallup Poll of the Public's Attitudes Toward the Public Schools," which has found little change in the public's opinion of the public schools since 1976; fairly consistently people have rated their own schools higher than public schools nationally. In 1982, over one-third rated their own schools "A" or "B," one-third "C" or average, and approximately one-fifth rated them poor or "D" and "Fail"; whereas, only one-fifth thought the schools in the nation were good, more than two-fifths thought they were average, and one-fifth thought they were poor (Gallup, 1982, 39).

Some have perceived the declining confidence in public schools as a reflection of an overall decline in public confidence in public authority and public institutions (Weiler, 11). Others have contended that too much too soon was expected of the schools, and the public is disappointed because they have not produced accordingly (Goodlad 1979, Husen 1979). Other reasons cited for this national decline of public confidence in the schools are unpopular policies mandated by distant authorities, media stories that overemphasize sensational issues, bureaucratic school systems unresponsive to public demands, and militant teacher tactics (Kirst, "Loss of Support," 1981, 52).

The influence of these issues on public opinion cannot be assessed accurately either nationally or locally, but there are some factors which may provide partial explanations for declining public support of the schools. One of these is a decline in the number of public school parents; recent estimates indicate that only 25 percent of the population currently has children enrolled in the public schools (Solorzano, 1982, 43). Even though public school enrollments are predicted to increase during the mid to late 1980s, the number of children attending public schools will not reach the peak figures of the 1960s and 1970s.

Another factor closely related to less active public school participation is declining support for increased funding for public education. Inflationary costs and a little-or-no growth economy inevitably produce competition among public services for limited dollars. With declining enrollments, taxpayers are increasingly concerned about expensive school buildings, escalating costs for school transportation and the maintenance and operation of schools, and demands for higher teachers' salaries. Even though much of the additional cost of education can be attributed to inflation, nationwide expenditures for kindergarten through grade twelve increased $23 billion (after inflation) from 1970 to 1980, despite enrollment declines; during the same period, state expenditures for education increased 44.5 percent in real dollars (Kirst, "Loss of Support," 47). The public is increasingly demanding proof of "value received" for the expenditure of public funds; in response, educators, administrators, and governing bodies are examining the present quality of public education.

A decline in test scores nationally is the evidence most frequently cited indicating a need to improve the quality of education, in particular, the decline in average scores on the Scholastic Aptitude Test (SAT). Average SAT scores declined steadily from 1962 to 1980, and the decline has been highly publicized. The national average SAT scores did not change in 1981 and rose slightly in 1982. This slight increase may indicate the end of an eighteen year downward trend and an upward shift in achievement.

Similar drops, but not as great, have occurred since the mid-1960s in national average scores on examinations given by the American College Testing (ACT) Program. Though not as well documented or highly publicized as the college entrance test score declines, scores on standardized achievement tests have declined nationwide since 1970. "Score declines have been largest at the 12th-grade level and somewhat less at each successively lower grade, with the averages at grades 1 to 4 remaining relatively constant" (Wirtz, 1977, 21). The decline in test scores has not been limited to any one segment of the school population; therefore, researchers have concluded that overall there "has been a lowering of educational standards . . ." (Wirtz, 31).

One last reason for the current emphasis on educational quality should be mentioned, that is, the cyclic nature of school reform. According to Milton Goldberg, executive director of the National Commission on Excellence in Education, "Every thirty years or so people question their confidence in the public schools" ("Schools Marching," 1982, 8). The present concern for quality and outcomes of education is a natural development following school reform efforts in the 1960s and early 1970s to provide equal educational opportunity for all students. This movement was followed by the accountability movement which began in the 1970s, and resulted in minimum competency testing of teachers and students. This trend toward accountability has resulted in a movement toward quality, or a demand for excellence for all students.

The Search For Quality

Ideally, a "quality" education should provide a curriculum and instruction which allows each individual to develop his/her capabilities to the maximum extent. Since such an ideal, if it were attainable, would be very difficult to measure, certain standards must be set for measuring the quality of instruction received by students. The quality of schooling is generally measured in terms of achievement, or the mastery of certain learning tasks. The difficulties involved in measuring student achievement are multiple.

Generally, two types of tests are used to measure student achievement: norm-referenced tests and criterion-referenced tests. Most national standardized achievement tests fall in the first category. A debate is underway in the educational community concerning the validity and fairness of using norm-referenced tests to measure student achievement (Pipho, Task Force

Meeting, Feb. 18, 1982). There is some evidence that testing companies may be moving toward criterion-referenced tests to measure academic performance, but in the absence of a better yardstick, most schools use national standardized norm-referenced achievement tests to measure student progress in learning and for diagnostic purposes.

Quality Indicators Found in Effective Schools

Effective schools are generally defined as schools in which achievement in basic skills measured by standardized tests occurs. Most of the "effective school" research has concentrated on achievement in grades 1 through 8. For a number of years, educational researchers have tried to find out why some schools have high achievement levels and why others do not. Great strides have been made in this field in the last fifteen years, and the findings are significant for all persons involved in education.

Early studies of effective schools concentrated on such school resources as "physical facilities, library books, student-teacher ratios, and school size" (Murnane, 1981, 20). Other studies examined school factors such as training and experience of teachers, the number of certain types of specialists, curricular offerings, age of school buildings, and per pupil expenditures (Cohen, 1982, 13-14).

The turning point in research on effective schools occurred in 1966 with publication of James Coleman's Equality of Educational Opportunity Report. This "study examined characteristics of schools (e.g., physical facilities, curriculums, and instructional materials), their staffs (e.g., teacher training, experience, ability, and attitudes), and their students (e.g., socioeconomic and racial or ethnic background)" (Cohen, 13). The most frequently quoted finding of this study was "when compared to the influence of family background, these different school characteristics have relatively little influence on the measured achievement of pupils" (Cohen, 13). A study conducted in England about the same time (The Plowden Report, 1967) reached a similar conclusion, "that home influences far outweigh those of the school" (Rutter, 1979, 2).

Realizing that home factors are important and must be taken into consideration, educational research turned its attention toward proving that "schools do make a difference" by examining what actually occurred in schools and classrooms with less emphasis on the physical characteristics of schools. Many of these studies examined inner city schools with low socioeconomic student populations which had high levels of achievement (Weber 1971, Summers and Wolfe 1975, Edmonds 1979). Researchers found that even after taking into consideration home influences and family background, significant differences occurred in the amount of learning found in different schools and in different classrooms within the same school (Murnane, 20). This finding reinforced the American belief that schools do matter and resulted in the identification of certain characteristics of effective schools.

The factors identified with effective schools defined in terms of student performance on tests of basic skills were synthesized by Cohen and are discussed briefly below.

1. Strong Administrative Leadership by the School Principal

   The principal is first and foremost an instructional leader. Such principals take a "strong initiative in identifying and articulating goals and priorities for their schools . . . ; hold themselves and their staff members personally accountable for student achievement in the basic skills; (u)nderstand the school's educational program inside out; and . . . often have strong backgrounds in reading instruction, or they have found someone else who can provide direction in this area. Their first priority is instruction, and they communicate this to their staffs" (Benjamin, 1981, 14). In addition, effective principals are highly visible, are assertive disciplinarians, try to select their own staff, and "(s)et a consistent tone of high expectations for their staff and their students" (Benjamin, 14).

2. A School Climate Conducive to Learning

   The most effective learning takes place in a safe and orderly school free of discipline and vandalism problems. Edmonds described an effective school's atmosphere as "orderly without being rigid, quiet without being oppressive, and generally conducive to the instructional business at hand" (Edmonds, 1979, 22). A school climate conducive to learning also requires that interruptions be kept at a minimum.

3. School-wide Emphasis on Basic Skills Instruction

   Such emphasis "entails agreement among the professional staff that instruction in the basic skills is the primary goal of the school" (Cohen, 15). It also requires that "pupil acquisition of basic skills takes precedence over all other school activities" (Edmonds, 22).

4. Teacher Expectations That Students Can Reach High Levels of Achievement

   Teachers expect all children to achieve regardless of family background and somehow convey this to students. A New York study found higher achievement among students whose "teachers expected more children to graduate from high school, to go to college, to become good readers, and to become good citizens . . . " (N.Y. Educ. Dept., 1976, 13). Edmonds described this factor as a climate of expectation in which children are not permitted to fall below effective levels of achievement (22).

5. A System For Monitoring and Assessing Pupil Performance

   Such a system is tied to specific learning objectives and provides careful and frequent evaluation of pupil progress. This system provides feedback for both teachers and students regarding their success and allows for identification of learning problems before it is too late (Cohen, 15).

Other Quality Indicators

Several other school factors which exert an influence on the quality of instruction should be noted. A search of the literature did not reveal the general agreement about these school resources that is found in the "effective schools" research, but there is proof that they affect achievement. Following is a brief discussion of each of these factors.

Curriculum

Educators view curriculum in two ways. One view perceives it "as the means to attain specified objectives"; the other defines curriculum as "all teaching and learning that may go on in school, planned or unplanned" (English, 1980, 3). Curriculum in this study is viewed as the planned learning experiences resulting from a set of identifiable educational objectives in which students participate from kindergarten through grade 12.

Social and economic conditions perhaps exert more pressures on school curricula than on any other aspect of education. In the 1940s the relevance of curriculum was attacked by psychologists and social workers who maintained the "whole" child was not being educated (Armbruster, 1977, 96). Again, in the late 1950s and early 1960s with the advent of Sputnik and President Johnson's call for a "broader social mission for schools," cries for overhauling curriculum were heard and reform began (Armbruster, 97). More recently, the societal pressures of a slow-growth economy, fewer public school parents, declining test scores, competition for public funds, and a general loss of confidence in public education have resulted in an examination of the quality of public school curricula.

According to Michael Kirst, central to the reduction in public schools' standards, rigor, and quality is "a watered-down curriculum and the lack of sufficient time spent by students on challenging academic material" ("Loss of Support," 45). It is indeed a truism that a person cannot learn something unless he is exposed to it. After reviewing numerous achievement studies, Kirst came to the conclusion "that differences in mode (e.g., teacher strategy) or medium (TV vs. class lecture) do not as a rule have as great an effect on subject matter achievement as curriculum content and emphasis" ("Curriculum: A Key," 1981, 2).

Kirst's views are reinforced by international achievement studies which found an association between curricular changes and declines in students' test scores (Inkeles 1979, Husen 1979). In analyzing secondary achievement declines in the United States, Kirst observed: (1) a serious decline in electing more advanced courses, (2) markedly reduced content and expectation in advanced courses, (3) weakened graduation requirements and lowered college entrance requirements, (4) texts not sufficiently challenging, and (5) a startling decline in social studies enrollments ("Curriculum: A Key," 3).

An intensive study conducted by the Advisory Panel on the SAT Score Decline identified certain "pervasive" influences on the SAT score declines relative to curriculum: "the adding of many elective courses and a reduction in the number of courses that all students alike are required to take, . . . a tendency to avoid precise thinking," less emphasis on "critical reading and careful writing, . . . the lowering of the demand levels of textbooks and other teaching and learning materials, . . . and the reduction of homework" (Wirtz, 46-47).

Time on Task

Perhaps the most definitive research in relation to curriculum has been performed on the relationship between time use and student learning. These studies have examined the impact of time on learning from three aspects: (1) "the amount of time children spend in school," (2) "the amount of time devoted to basic skill development," and (3) "the amount of time children spend 'on task,' actually working at basic skill development" (Murnane, 25).

There is evidence that the third aspect of time, "time on task," is clearly relevant to learning (Bloom, 1974). Studies of teacher effectiveness indicated that "(t)he more time students spend 'engaged' in (i.e., paying attention to) a learning task, the more they will master the task" (Gudridge, 1980, 9). Still other studies reported that for students of low socioeconomic status (SES) the "amount of time spent in direct individualized instruction was a critical variable in the student's reading achievement," but the same was not true for high SES students (Rouk, 1979, 9).

Curriculum Decisions and Trends

Curriculum decisions in most states are made at several levels; they are made by state legislatures and state boards of education, local boards of education, and the local schools themselves. Provisions enacted at the state level usually are broadly stated goals that "indicate the general purposes for which the curriculum is the means of attainment" (English, 6). Local boards of education generally set the specific objectives of curricula that affect classroom instruction, but this responsibility is sometimes shifted to the individual schools. In most of the fifty states, high school graduation requirements are mandated at the state level, but a few states delegate this responsibility to local school boards.

Increasing public pressures for improving the quality of public education are resulting in curricular changes throughout the states. Several dominant trends seem to be emerging. One movement is toward competency based education (CBE) with curricula designed to produce competencies in certain areas. Oregon perhaps has the most complete CBE program with nine identified competency areas referenced to one or more of ten curriculum program titles. Louisiana has recently enacted a competency based education program which provides for establishing statewide curriculum standards for required subjects for all grades (Chapter 750, 1979 Louisiana Public Acts).

Another strongly identifiable trend is toward a "core curriculum" or a body of required subjects for all students. As Kirst stated:

> Educational reform in the 1980s should not simply add new layers and functions around existing ones. What is needed is a balancing of functions, a realism in claims, and a focus on a core curriculum that schools can actually implement ("Loss of Support," 65).

Recently, the Texas Legislature eliminated required courses it had previously mandated and directed the State Board of Education to devise a new core curriculum on essential subjects. Perhaps the most radical call for curricular reform along these lines is the Paideia Proposal, which eliminates electives and proposes the same basic schooling for the whole population (Adler, 1982, 17).

Another recent trend, as exemplified in Ohio, is the establishing of a college preparatory curriculum. The Advisory Commission on Articulation Between Secondary Education and Ohio Colleges in April 1981 set forth the requirements of a college preparatory curriculum which they have urged all Ohio private and public four-year institutions to require unconditionally for admission. The required curriculum would include: four units of English, a minimum of three units in mathematics, three units of social studies, three units of science, and three units of foreign languages.

Some states have increased the total number of units required for graduation, and some school districts and high schools are elevating academic standards on their own. Whatever method is being used, the consensus is that curriculum is related to quality and that curricular reform hopefully will help improve the educational quality of our schools.

Textbooks

In many curriculum areas, the textbook is the primary teaching aid used. Since textbooks are the most obvious educational tools, they are often the object of intense scrutiny and criticism when dissatisfaction with the quality of schooling occurs. In recent years, textbooks have been under fire from the standpoint of content (both subject-matter and philosophical) and level of challenge. Nationwide some parents and educators, alike, feel that the present quality of textbooks is related to a national decline in student achievement.

There is evidence that the challenge level of textbooks can affect student achievement. The findings of an in-depth study of the relationship between textbooks and declining SAT test scores performed by Jeanne Chall in 1977 for the Advisory Panel on the SAT Score Decline support this view (61-64).

Educational Technology

Educational technology may be considered as technical methods which have "objectives based on research in human learning and communication and use both human and non-human resources to bring about more effective learning" (Pitts and Schneider, 1981, 1). For the past sixty years, the classroom has been bombarded with technological devices purporting to further learning. Since the early 1950s, interest has centered on the use of electronic equipment to aid the teaching process. The most obvious technological device currently in use in schools is instructional television, but the most recent emphasis in educational technology is on computers, especially on microcomputers as instructional tools.

With sophisticated devices capable of many educational tasks and available at relatively modest costs, microcomputers are being hailed as efficient, economic educational tools for schools in a period of declining enrollments and declining fiscal resources. Some researchers foresee computers as bringing about a technological revolution in the schools; others perceive them as one more gadget in a long line of dismal failures for which the educational community must assume the blame. Whatever the viewpoint may be, the jury is still out on the future potential of computer-based instruction in improving the quality of education. The verdict will depend on a number of factors, such as: (1) the development and availability of quality courseware, (2) proper education of teachers (both preservice and inservice) in the use of computers, (3) continued research on the role of computers in instruction, and (4) strong planning and initiative on the part of administrators to provide leadership in purchasing appropriate hardware and the proper placement of it in schools (Seidel, 1981).

A key role for the computer in education today is "teaching students about itself," or computer literacy (Bourque, 1982, 48). In a highly technological society, such as ours, children and youth may need some familiarity with computers and the language in order to cope with computers in everyday usage. Other roles primarily in usage for computers in schools at the present are: tutorial, drill and practice, simulation, and testing/record keeping.

Teacher Preparation

"The best single investment in education remains with teachers and how they behave" (Hansen, 1981, 223). As previously noted, a teacher's attitude toward his/her student's ability has been found to be a critical factor in the learning process. While the "effective school" research was being conducted, similar studies were directed toward finding the key to effective teaching. Instead of focusing on personal attributes of teachers (such as sex, age, training, and experience), the researchers examined what actually took place in the classroom. This activity produced a wealth of information on successful classroom management techniques, behavior characteristics of effective teachers, personality traits of good teachers, effective teaching techniques for different types of students, etc.

The findings of the "effective teacher" research are significant for teacher preparation institutions which have the responsibility "to ensure that attitudes, skills, and competencies, and experimental opportunities are sufficient to prepare individuals in the profession. A knowledge of methods and techniques does make a difference" (Hansen, 225). This information can also be very useful to school administrators in establishing certification requirements, planning productive inservice education programs, and developing appropriate personnel evaluation techniques. Since teacher preparation programs were addressed by the Higher Education component of this study, the K-12 portion examined primarily the implications of certification requirements, inservice education, and personnel evaluation for improving the quality of instruction.

Teacher Certification

Certification is a procedure through which a state education agency publicly declares that a person has met a certain set of minimum standards which licenses that person to teach in that state's public schools. The generally accepted purposes of certification are three-fold:

1. to protect the public from those who are not qualified
2. to stimulate the improvement of individual teachers through their participation in the licensure process
3. to enhance and advance the profession by raising the quality of its membership and "by publicly demonstrating responsible intraprofessional quality control" (Floden, 1979, 33).

While an individual may, by gaining certification, be declared qualified to teach, such certification does not guarantee that an individual is necessarily competent to teach. Originally, the first generally accepted purpose of certification was to protect the public from incompetent teachers; however, the completion of certain specified criteria leading to certification does not assure that an individual possesses those subjective qualities so vital to the profession.

A review of the certification manuals of the states within the Southern Regional Education Board (SREB) indicated much similarity in course work requirements for the purposes of certification. All states in the region base certification on the completion of a prescribed set of coursework requirements in three component areas. These components include a general education core, a professional education core, and a specialized endorsement or content area.

Substantive differences do not exist in the mere naming or categorization of certificates in the SREB states; however, some differences exist in the types of certificates issued. Several states issue a different certificate for each degree, bachelor's through the doctorate, for example, South Carolina and Mississippi. Other states issue one certificate and simply indicate the level of preparation on its face, for example, Tennessee, Virginia, Kentucky, and Florida.

Differences do exist in the duration and renewability of certificates. The duration of certificates for professionally prepared educators ranges from three years to life. In most SREB states the initial period of professional certification is three to five years while in Tennessee it is ten years. In some states (e.g., Georgia) the initial certificate based on the bachelor's degree is non-renewable and a new credential with renewability provisions may be secured only upon successful completion of an assessment period. Attempting to promote performance based competency, Georgia requires satisfactory demonstration of on-the-job competence before renewal of the initial three-year certificate. All states require either additional college preparation or participation in specific staff development programs to be completed prior to the expiration date of the certificate as prerequisites to renewal.

Inservice Education

Some educators and lay persons, alike, see days set aside for "inservice" as a waste of time and taxpayers' money; others view appropriate inservice education as the chief hope for improving the present quality of instruction, an opinion becoming increasingly significant in light of a trend toward an almost stable teacher work force. If inservice education is vital to developing the school's most important resource, its staff, what then can make the difference between effective and ineffective inservice programs?

A review of 97 studies of inservice education was conducted by Professor Gordon Lawrence of the University of Florida, Gainesville, to determine the ingredients of inservice programs which teachers identified as most beneficial. His findings showed that effective inservice programs:

1. were school-based, rather than college-based
2. emphasized self-instruction by teachers
3. placed the teacher in an active, rather than passive, role
4. emphasized demonstrations, supervised trials and feedback
5. offered opportunities for teachers to share and provide mutual assistance to each other
6. were linked to a general effort of the school
7. allowed teachers to choose goals and activities for themselves (Gudridge, 54-55).

The preceding example of teacher input reinforces the findings of Burrello and Orbaugh who have observed the implementation of inservice education for the past four years and have reviewed the professional literature on the topic (1982).

The Commission on Education of the American Association of Colleges for Teacher Education has recommended that school districts spend a minimum of 10 percent on inservice education, but some districts have found ways of establishing effective inservice programs without a lot of additional cost. An outstanding example of this is an inservice center established by fifteen rural districts in Southeastern Colorado which charges users fees and is now self-supporting. Other districts have received support for programs through ESEA Title IV-C grants and still others from the "National Diffusion Network (NDN), a federally funded program that enables schools to improve their educational offering by helping them to 'adopt' more than 160 exemplary NDN projects" and provides inservice training for teachers "in the use of the project's methods and materials" (Gudridge, 59). Other districts have formed partnerships with local universities, e.g., Eastern Michigan University and the Ann Arbor School District, the University of Utah Graduate School and three Utah school districts (Hanes, et al, 1982, 388; Nutting, 1982, 394).

Many states have taken the lead in establishing teacher centers, some with state funds and others with federal support from the Teacher Centers Program established in 1978. Michigan, Florida, and California are all examples of states which have established networks of training centers for teachers. Two states, Maine and Maryland, have established academies for principals which focus on training them to be effective instructional leaders as well as able managers.

One educator has stated, "The history of inservice education cannot be characterized as a string of dazzling triumphs" (Popham, 1981, 5). The future of inservice education will depend a great deal on the demonstration of its positive effects on staff performance and productivity. Properly dealt with, inservice education can become a powerful force in improving the quality of instruction.

Personnel Evaluation

The emphasis on accountability in public education during the last few years has accelerated the need for effective evaluation of personnel. The issue is no longer whether to evaluate or not, but how schools can use evaluation to produce effective outcomes. A brief look at what the experts are saying and some present practices in other states follows.

Two approaches to evaluation of personnel are generally recognized: (1) "formative" evaluation which "is used to gather specific information about each teacher's strengths and weaknesses in order to improve individual performance"; (2) "summative" evaluation which is "used to collect a broad sample of information about a teacher's overall performance in order to make administrative decisions, such as salary increases, promotions or dismissals" (Lewis, 1982, 9). A recent survey of more than 400 school systems conducted by the American Association of School Administrators indicated that the primary purpose of evaluation listed by school systems was "formative," that is, to improve the instructional program.

As previously stated, recent research findings on effective teachers may well produce better techniques for evaluation. Madeline Hunter, a professor of education and principal of the lab school at UCLA, has developed a Teacher

Appraisal Instrument composed of five questions which allows an evaluator to measure a teacher's success by observing one lesson between a student's pretest and post test (Lewis, 19). The Beginning Teacher Evaluation Study (BTES), commissioned by the California Commission for Teacher Preparation and Licensing and carried out by the Far West Laboratory, produced information on teacher effectiveness. As a result of this study, "researchers developed a measure of student learning called 'academic learning time' (ALT), in which the student is spending time on an academic task" (Lewis, 15). The study also identified certain teacher behaviors that increase student learning: diagnosis, prescription, presentation, monitoring, and feedback.

Two nationally known experts have made great strides in refining evaluation procedures. Redfern, often called the father of the performance objectives approach in public education, has refined Peter Drucker's "management-by-objectives" approach used in industry during the 1950s and 1960s. This is a formal type of evaluation which requires mutual planning by teachers and evaluators, observation, and follow-up (Lewis, 29). Stanley Schainker has developed procedures for the "clinical supervision approach" that are being offered by the Far West Laboratory for Educational Research and Development in San Francisco (Lewis, 43). Even though the state of the art is far from perfect and no one evaluation method suits all situations, "formative" evaluation techniques are available.

At the annual meeting of the Education Commission of the States in August 1981, "governors and state legislators alike stood up and said teacher evaluation was the domino that would make all the others fall in place" (Gudridge, 7). Governor Jim Hunt of North Carolina stated, "Well-designed evaluation methods will be the salvation of the schools, not do them in" (Gudridge, 8). Indeed, many state legislatures are reluctant to appropriate additional funds for education until public confidence is restored in the schools; many of them feel that the solution is to improve teaching.

Both California (the Stull Act) and Connecticut have passed evaluation laws. Georgia is often cited as a model system which avoids strict mandates. The Georgia Teacher Performance Assessment Instruments (TPAI), which were originally designed to assess beginning teachers for certification, are being used by large school systems to plan staff development for experienced teachers. The North Carolina Quality Assurance Program in teacher education is a joint endeavor of the North Carolina State Board of Education and the University of North Carolina Board of Governors. This plan, originating in 1979, is directed toward a total revision of teacher education and evaluation, and the state assembly in 1981 appropriated $1.25 million a year for a two year period to implement the plan (Lewis, 65). Improvement in evaluation programs are taking place across the nation, but the most innovative approaches seem to be centered in the South.

Teacher Pay

A frequently mentioned possible means of improving instructional quality is some form of merit, or incentive, pay for teachers. Proponents of merit pay state that it rewards effective teachers who are more valuable to an educational program and deserve to be paid more and that it produces better teaching. They argue that a lockstep salary schedule stifles initiative and insures reward regardless of effort or quality of performance (Hart, 1980).

The greatest argument against merit pay plans has been the lack of means to measure teacher competency accurately. Due to the subjective nature of most personnel evaluation, the fairness of rewarding individual performance has been suspect. If teachers and administrators were evaluated properly and fairly, a logical result would be for them to be paid accordingly instead of the same salaries across-the-board.

School Approval

School approval is concerned with whether schools have met certain required standards set by state and federal regulations. Some of these standards have to do with the physical aspects of schools (condition of buildings, amount of space, equipment, etc.), pupil personnel services, and class size. A brief look at what educational research has found about the relationship between these school factors and the quality of instruction follows. This discussion is not intended to imply that these school resources are not important in the overall climate of schools or the entire learning process.

As previously described, the study of what school factors produce effective learning has shifted in the last fifteen years from the physical qualities of schools (e.g., age and size of buildings, number of library books, number of specialists, etc.) to less tangible school characteristics. This change in emphasis does not mean that physical conditions do not matter. As one study pointed out, they may be important in attracting and retaining good teachers (Summers and Wolfe, 7). Certainly, a teacher would prefer to teach in pleasant surroundings with adequate instructional materials and optimum support staff. What the research has shown is that the general physical facilities of schools have little to do with the quality of a student's learning (Summers and Wolfe, 7; Rutter, 178).

Research findings are mixed on school size and the arrangement of schools. One study found that increased learning took place in small schools at the elementary and senior high levels, but that the size of junior high schools did not seem too important. The same study reported higher achievement for 8th grade students when the 8th grade was part of an elementary school (Summers and Wolfe, 6). The age of the school buildings, amount of instructional materials, amount of space, and the number of pupil services (i.e., guidance, social workers, etc.) were not found to be factors directly related to achievement (Summers and Wolfe, N.Y. Educ. Dept., Rutter).

Perhaps the most frequently discussed issue in school organization relative to achievement is class size or pupil-teacher ratio. The findings are mixed, but there is some proof that smaller classes are more beneficial to low ability students and low SES students and that all students in the primary grades perform better in small classes (ERS, 1980, 69). The findings of Smith and Glass in this area have been analyzed and debated by the educational community, but despite the volume of research, there is no real consensus on how class size affects achievement. As one author stated "the effect of class size surely depends on a teacher's instructional strategy" (Murnane, 24).

The Quality of Tennessee's Public Schools

When Tennesseans were asked on the Public Opinion Survey to assess the statewide image of public education in Tennessee, their responses followed a pattern similar to the responses on the most recent education Gallup Poll. Thirty-two percent of the Tennesseans surveyed thought the statewide image of public education was good, 43 percent thought it was fair, and 20 percent thought it was poor. Educators, administrators, and parents were asked the same question on the K-12 Public Education Survey; and their opinions overall were a little higher than the general public's: 31 percent of them thought it was good; 50 percent, fair; and 19 percent thought it was poor. Principals, superintendents, and board members assessed public education's statewide image higher than either parents or teachers.

When asked to rate the quality of their own schools, there was a general tendency for educators and administrators to rate their schools a little higher than parents. School administrators as a group rated "the return received for tax dollars spent on education" much higher than either parents or teachers. Parents (72 percent) thought the return was fair to poor, whereas the teachers' responses were divided--53 percent thought it was good to excellent and 47 percent thought it was fair to poor. Respondents to the Public Opinion Survey did not rank "the return received for tax dollars spent on education" as highly as the K-12 educators or administrators; 63 percent assessed it as fair to poor, and 25 percent thought it was good to excellent. These results substantiate a definite trend found in the Tennessee surveys and the national Gallup Poll for persons involved in the public schools to rate them higher than those who are not involved.

Quality of Instruction

In attempting to assess the present quality of instruction found in K-12 in the state available statistical data, information provided by the Tennessee State Department of Education, and the results of the K-12 Survey were utilized. The picture portrayed by this information is of necessity statewide and does not reflect conditions found in any individual school system. Wide variations occur throughout the state in student attainment, curriculum requirements, textbook selections, training and experience of teachers, inservice education, evaluation techniques, and teachers' salaries.

Student Attainment

Achievement Tests. Tennessee does not have a mandatory statewide achievement testing program. School systems are required by State Board regulations to test students for skills in mathematics, spelling, language, and reading at the 4th 5th, 6th, and 8th grade levels for diagnostic purposes (Tenn. Bd. Educ., 1979-80, 48-49). The state is not responsible for either selecting the tests or for furnishing them to local school districts. All school systems administer some achievement tests, but the frequency, type, and use of the tests vary from system to system.

The most recent statewide data on student achievement were found in The Educational Assessment of Schools in Tennessee (State Test. and Eval, 1981). This study tested all of the students in grades 4, 8, 9, and 12 in a random sampling of schools each year for five years. Students in grades 4, 8, and 12 were given the Stanford Achievement Test, and the Career Maturity Inventory (McGraw-Hill) was administered to 9th graders. "The basic purposes of the study were to ascertain the levels of achievement in the four grades and to determine whether the achievement levels were increasing from year to year" (State Test. and Eval., 1). Results of the study for grades 4, 8, and 12 are presented below. Since the 9th grade test was not an achievement test, it is omitted.

Grade 4. In 1980 scores were either above or at grade level for Math Computation, Spelling, Language, Total Reading, and Total Math; they were slightly below grade level for Vocabulary, Reading Comprehension, Word

Study Skills, Math Concepts, Math Applications, and Total Auditory. The Total Battery scores were slightly above the national average. Since 1976, the achievement of students in grade 4 has increased in every category, and the overall test scores have increased from slightly below grade norm to slightly above grade norm.

Grade 8. In 1980, scores were below the national norms in every category, particularly in Social Science and Science. Since 1976, overall achievement of 8th grade students has increased slightly (nearly one-half a grade level), but their scores are still about eight months below grade level as compared with national norms. The greatest increases occurred in Vocabulary, Math Computation, Math Application, and Language; the smallest increases were in Reading Comprehension, Math Concepts, Spelling, and Science.

Grade 12. In 1980, scores were considerably below national norms, particularly in Reading and Math. Grade level equivalents for these 12th grade students were: Reading--10th grade, 2 months; English--11th grade, first month; and Mathematics--beginning 10th grade. Since 1976, their scores have increased slightly in Reading and in English but have declined in Mathematics (State Test. and Eval., 1-7).

In the Spring of 1981, under the Study of Education program, a random sample of students in grades 9 and 12 was given the Metropolitan Achievement Test, 1978 Edition. Their rankings were as follows:

Grade 9. In a random sample of 442 students, the typical Tennessee student in 1981 ranked at or near the 50th percentile nationally in Mathematics, Language, and Science. In Reading and Social Studies, the typical Tennessee student ranked at the 40th and 44th percentiles, respectively.

Grade 12. In a random sample of 338 students, the typical Tennessee 12th grade student in 1981 ranked at the 52nd percentile nationally in Language. Other rankings for the typical Tennessee 12th grader were: Reading, 38th percentile; Math, 36th percentile; and Basic Battery, 36th percentile.

As part of an assessment of basic skills in the early grades, reading readiness tests have been administered in grades 1 and 2 and the Metropolitan Primary Survey Test was administered statewide in 1980 and in 1981. Students in these three grades scored about the same in 1981 as they did in 1980. Test scores showed that students in these three grades were performing at or slightly above the national average. National rankings of students in grade 2 were slightly lower than the national rankings of students in grade 1 or grade 3.

State Proficiency Test. In 1983, a minimum passing score will be required on the State Proficiency Test for seniors to receive a high school diploma. This test, which is given in grade 9 and again in grades 11 and 12 for those who have not passed it, is a "criterion referenced" test. The Tennessee test contains questions relating to fifty objectives. Since it is a state-developed test, performance on the Proficiency Test can be viewed solely in light of how well Tennessee students have mastered the test's objectives. Results of the 1982 State Proficiency Test given to 9th grade students showed that statewide 61 percent of the 9th graders passed all sections of the test. The percentages of 9th grade students statewide passing each section were: Math--82 percent, Spelling--85 percent, Language--71 percent, Reading--79 percent. In twenty-two school districts, 75 percent or more of the students passed all sections, and in sixteen systems, less than 50 percent of the students passed all sections.

American College Testing Program (ACT). In 1980-81, a total of 33,606 students in Tennessee participated in the American College Testing Program. This number included juniors and seniors in public and nonpublic schools. The mean score for this group was 17.5 and the average high school average was 2.9; national averages for college bound students were 18.5 and 2.9, respectively. The average ACT scores for Tennessee students have remained fairly static for the past five years, but have declined somewhat from scores achieved ten years ago, particularly in Mathematics and Social Studies.

Scholastic Aptitude Test (SAT). About 4,800 Tennessee seniors took the Scholastic Aptitude Test in 1981; approximately 59 percent of these were public school students. The average verbal score of Tennessee students was higher than the national average (475 compared with 424), and their average math score was considerably higher than the national average (514 compared with 466). The SAT scores of Tennessee students have remained fairly stable over the past ten years while nationally the scores have declined. It should be noted, however, that not many colleges and universities in the region require SAT scores and that taking the test is voluntary. Hence, the Tennessee students who take the SAT may be the more able students to begin with and the trend reversal (from the national averages) may reflect stiff competition among the better students for limited spaces at certain colleges and universities.

Considered as a whole, achievement in Tennessee in K-12 reflects national trends previously mentioned, that is, lowest at the 12th grade level, somewhat less at each successively lower grade, with grades 1 to 4 increasing or staying about the same. The only exception to this is the stability of the SAT scores.

Some persons attribute this achievement decline to larger numbers of persons staying in school longer and a change in the composition of the school population. Studies, previously mentioned, on the decline of SAT scores nationally determined that only one-third of the drop in test scores since 1970 could be attributed to such changes (Wirtz).

For this study, it was impossible to arrive at an accurate high school dropout figure because of lack of information concerning in/out-migrations and enrollments in nonpublic schools. Data from the 1980 census revealed that Tennessee ranked sixth lowest in the nation and sixth lowest in the Southeast (ranking from low to high) in the number of high school graduates, with 55.4 percent of the state's population, 25 and over, having finished high school. The number of persons in the state over eighteen years of age who received General Educational Development (GED) certificates in 1981 was twice the number awarded five years prior. In light of these statistics, it is unlikely that the lower levels of achievement in the upper grades are caused solely by differences in the student population.

Curriculum Requirements

Curriculum requirements in Tennessee are established from the state level to the local. In 1951, the General Assembly charged the State Board of Education with the responsibility of prescribing curricula and approving courses of study adopted by local boards of education upon the recommendation of the superintendent of schools, provided that such courses are in accord with State Board rules and regulations. Such courses and curricula must include "adequate provision for the growth of its pupils in the skills basic to citizenship in American democracy" (T.C.A. 49-109).

In 1925 prior to designating this responsibility to the State Board, the General Assembly mandated courses of study for all public elementary schools and city elementary schools. These curricula, though modified, remain on the law books today (T.C.A. 49-1901, 49-1902).

Though not as specific in regard to high school curricula, the State Legislature at various intervals has mandated courses at the secondary level. These include one (1) year of instruction in American history and government, preferably in the fourth year (T.C.A. 49-1903); the study of the United States Constitution (T.C.A. 49-1907) and the Tennessee Constitution (T.C.A. 49-1908); and "a program of instruction . . . on the essentials of the free enterprise system" for one-half (½) unit of credit (T.C.A. 49-1928). Schools are charged to include at some level courses in Negro history and culture (T.C.A. 49-1927); safety instruction for fifteen (15) minutes each week for all students (T.C.A. 49-1916); and instruction on the use and display of the American flag (T.C.A. 49-1909). The State Department of Education is directed to promote driver education courses (T.C.A. 49-115), and the State Board is authorized to require a minimum defensive driver education course in schools offering driver education courses (T.C.A. 49-1925). In 1981, the General Assembly mandated a passing score (to be set by the State Board) on a proficiency test in language arts and mathematics in high school prior to graduation in 1983 and each year thereafter (T.C.A. 49-117).

In keeping with and in addition to these legislative mandates, the State Board of Education has adopted a state curriculum framework for local school systems. The curriculum framework is intended to carry out the goals of the State Board of Education and requires each school to provide instruction in the following areas: the arts (music and art); health education, physical education, and safety education; language arts; mathematics; science and environmental education; and social studies. Local school systems are encouraged to offer instruction in other areas of the curriculum in keeping with the needs of students. Additional courses of study for grades 9-12 must be approved by the State Board. Systems are urged to place emphasis on language arts and mathematics and to concentrate on reading, writing, arithmetic, and spelling in grades 1-3. Individual schools are charged to develop their instructional program within the system and state frameworks (Tenn. State Bd., 34-35).

High School Graduation Requirements. Requirements for graduation and a listing of approved courses for grades 9-12 are set forth by the State Board. Graduation requirements include an approved attendance, conduct, and subject matter record and a passing score on the State Proficiency Test for the 1982-83 school year and thereafter. Required graduation units of credit are:

English Language Arts	4 units
Mathematics	1 unit
American History	1 unit
Physical Education	1 unit
Health Education	½ unit
Science	1 unit
Economics	½ unit
Electives	9 units
Total	18 units

A unit of credit equals 175 class periods of not less than 60 minutes gross, or the time equivalency. Local boards of education have the authority to increase the unit requirements in the subject areas and in the total units required for graduation. Provisions are made for credit for out-of-school experiences for a maximum of two units of credit (Tenn. State Bd., 50-58).

A comparison of Tennessee's high school graduation requirements and the other SREB states revealed that Louisiana requires 22 credits for graduation; Alabama, Georgia, Maryland, and West Virginia require 20 credits; Kentucky, North Carolina, South Carolina, Tennessee, Texas, and Virginia all require 18 credits; and Mississippi requires 16. In Florida, graduation requirements are set by local boards of education. The number of credits required for graduation in Social Studies, Mathematics, and Science was lower in Tennessee than the SREB average requirement for these subjects, but the number of units in English required in Tennessee was a little higher than the SREB average. Only one other state (Georgia--10 credits) had a larger number of required electives than Tennessee, and the average number of electives required was 7.9 for all of the SREB states.

It should be noted that the State Board of Education is presently considering increasing the number of Carnegie units required for graduation to 20½. The additional required credits would be in Mathematics and Science with one-half (½) credit in Geography, World History, or Civics. Some high schools in the state require more than 18 units for graduation presently.

Curriculum Offerings. An examination of curriculum offerings in a randomly selected group of high schools across the state revealed wide variations. In some schools, only one year of math was offered; in others advanced placement courses were available; in some no foreign languages were taught; in others as many as three foreign languages were offered. Similar variations occurred in course offerings in Science, Social Studies, Art, Physical Education, and Music.

Time on Task. The State Board is considering requiring that certain periods of time be spent in the elementary grades on Language Arts and Mathematics. On the K-12 Survey, teachers, supervisors, and school administrators were asked how much time they thought should be spent on these subjects in grades 1-3 and grades 4-8. With all groups agreeing, their choices were:

Language Arts	
Grades 1-3	15 hours per each 5 day week
Grades 4-8	10 hours per each 5 day week
Mathematics	
Grades 1-3	More than 4 hours per each 5 day week
Grades 4-8	5 hours per each 5 day week

Educators and parents both were asked how much of the required school day (6½ hours) should be used for classroom instruction. General agreement was found among all groups that 80-90 percent of the school day should be spent in classroom instruction in grades 1-6 and 85-95 percent in grades 7-12.

Emphasis on Basic Skills. When asked to evaluate the emphasis placed on basic skills in grades 1-3 and grades 4-8 in their schools, all groups responding to the K-12 Survey said good to excellent, but approximately one-fourth of the parents thought it was poor. Emphasis placed on basic skills in grades 7-8 was rated lower by the entire group with over one-third considering it fair to poor. Over 80 percent of the educators and administrators thought formal reading instruction should be required in the 7th and 8th grades, but approximately 20 percent of the superintendents disagreed. Approximately 73 percent of the educational community agreed that a mathematics textbook should be adopted for use in grades 1 and 2, but one-fifth to one-third of the principals and superintendents disagreed.

Results from the Public Opinion Survey indicated that 89 percent of the public agreed that public school students should demonstrate an acceptable level of basic skill mastery at grade 8 before entering high school. The majority (74 percent) of the professionals responding to the K-12 Survey agreed that the State Proficiency Test should be replaced by a testing program in grades 1-8 that would produce a Basic Skills Certificate to be earned by students before entering high schools. The teachers agreed more strongly than the others on this question. Responses were mixed as to whether the State Proficiency Test should be broadened to cover other areas (e.g., Social Studies, Science, etc.). Approximately 50 percent of the educators favored this idea, but 50 percent disagreed.

Programs for the Gifted. By statute in Tennessee, the gifted are included in the definition of "handicapped child" and are eligible to receive special education services and funding if identified and properly certified (T.C.A. 49-2912). In 1981, a Task Force for the Gifted examined the definition of "intellectually gifted" established by the State Board of Education and the definition was subsequently clarified. During the 1980-81 school year, 5,669 students were identified and served under the handicapped law as intellectually gifted. This number does not include gifted and talented students served in regular academic programs. Some 49 school systems did not provide any programs for the gifted. In 1981-82, approximately $3.3 million in handicapped funds was distributed to LEAs for the intellectually gifted, and school systems can use Chapter II funds for gifted and talented programs.

The consensus of all groups on the K-12 questionnaire was that existing programs for the gifted were fair to poor. Teachers and parents gave these programs a poorer rating than the administrators. Some comments made on the questionnaire concerning the gifted were:

> Money, support for gifted is inadequate (Local Board Chairman).
>
> More programs are needed for gifted and nearly gifted students (Elementary Teacher).
>
> I feel that more emphasis should be placed on enrichment opportunities within the academic environment for gifted students, as these students are possibly our greatest natural resource (Secondary Parent).

It has been estimated that between 3 percent and 5 percent of the public school children in the nation are gifted, but that "40 to 60 percent of the country's gifted and talented are not receiving an appropriate education suited to their needs" (NCSL, 1981, 2). Studies in some states have also indicated that approximately 18 percent of the high school dropouts are intellectually gifted (Drinnon, 1978, 3). Indications are that this very important "natural resource" is being underutilized in Tennessee as well as the nation.

Other School Factors. Respondents to the K-12 Survey were asked to evaluate certain aspects of their schools, and the following items were ranked good to fair by all groups: evaluation of students' basic skills mastery, communication of students' progress to parents/guardians, the quality of existing programs and related services for handicapped students, the quality of remedial programs, and the effectiveness of early identification of students' learning problems. Even though the parents generally agreed with the educators on these items, they did not rate them as highly as did the professionals.

Textbooks

In Tennessee, most concerns about textbooks have centered on two issues which are indirectly related: the content of textbooks and the process by which they are selected. Concern with either of these issues is not new in Tennessee. In 1953, a Legislative Committee examined textbooks used in the state from the viewpoint of "subversive content" (Joint Com. Textbooks, 1953), and in 1980, a Select Subcommittee on Textbooks of the House Education Committee heard testimony from witnesses on textbook content and the selection process (Office of Legal Services, 1981). Testimony given at the March Public Hearing of the K-12 Subcommittee voiced concern with the way textbooks are selected and with the subject matter and moral/ethical values found in many textbooks. This study acknowledges that the subject matter of some textbooks is a genuine concern of some citizens, but an in-depth examination of all the textbooks used in the state was not possible. Further, any conclusions made in this area would necessarily involve value judgments outside the purview of the study. Since the content of textbooks and the selection process are interrelated, research focused on the method by which textbooks are selected in the state, and national findings on the relationship between the reading level of textbooks and the quality of student achievement.

Textbook Selection. Most concerns expressed about the adoption of textbooks in Tennessee center around two areas: the large number of books from which local systems must choose and the lack of parental or citizen input in the selections at the local level. Another aspect frequently discussed is the length of the adoption cycle. Before looking at the pros and cons of these issues, a brief explanation of the selection process follows.

State Textbook Commission. The State Textbook Commission is composed of ten members, nine of whom are appointed by the Governor for three year terms (T.C.A. 49-2001). The composition of the Commission is as follows:

County Superintendent	1
City Superintendent	1
School Principal	1
Teacher or Supervisor of Instruction (Grades 1-3)	1
Teacher or Supervisor of Instruction (Grades 4-8)	1
Teacher or Supervisor of Instruction (Grades 9-12)	1
Citizens (added in 1980)	3
State Commissioner of Education	1
Total	10

The six appointed professional members must be actively engaged in education in the state, have at least a B.A. degree, and five years of experience in education. The citizen members must be knowledgeable about education, but not employed in the public schools. The Commissioner acts as secretary of the Commission.

The Commission is charged "to prepare a list of approved standard editions of textbooks for use in the public school of the state" (T.C.A. 49-2008). The list must be presented to local school systems no later than February 1 of any year when listings are made and must contain at least four books in each subject and grade "if available and of sufficient merit to warrant being listed" (T.C.A. 49-2008).

State Adoption Process. The Commission meets in July to extend bid invitations to publishing companies for textbooks that will be up for adoption the next year. From July to October, publishers send sample copies of textbooks to the Commission and on the second Monday in October, the Commission opens the sealed bids from the publishers and signs the acceptable contracts (T.C.A. 49-2011). As of the next July 1, the contracts are binding for three to five years, but may be extended for an additional five years at renegotiated prices if "local systems indicate a sufficient interest in continued use of the textbooks" (T.C.A. 49-2010). After reviewing the sample texts, the Commission compiles the Tennessee Official List of Textbooks which is sent to local school boards. After approval by the Textbook Commission, publishers send sample copies of textbooks to local school systems for review by the local committees.

Since the Textbook Commission must review all of the sample textbooks from July to November, they are aided by committees who review the books regarding content, style, applicability, and cost. By law, the Commission members receive $15.00 per day for all commission meetings plus travel expenses (T.C.A. 49-2208). No funds are provided at the state level for the release of teachers to aid the Commission in examining the books. The books that are flagged by the committees as having problems are examined by the Commission members, but very few of the textbooks reviewed at the state level are removed from the list. This almost open-ended process at the state level results in a lengthy list of textbooks offered by some sixty publishers (some in only one subject area) which is subject to review by the local committees during a three month period.

Local Adoption Process. Local boards of education are required to make their textbook adoptions upon the recommendation of committees set up by subject matter fields and composed of three to five teachers or supervisors. The teachers or supervisors appointed to serve on the committees must be actively working in the respective subject areas, must hold professional certificates, and have at least three or more years experience in the public schools. The committees must be arranged by grade or groups of grades so that a series of books may be considered if needed. All committee members serve for one fiscal year, and the superintendent serves as an ex officio member of all committees (T.C.A. 49-2021). The adoption committees review the textbooks and submit their recommendations to the local board of education which makes the final decision to accept or reject any book. Following the board's approval, the superintendent sends a copy of the adoptions to the Commissioner of Education by April 25, and places the orders for delivery the following school year.

Two other facets of the present process are worth mentioning: opportunity for citizen input at the local level and the role of the State Department of Education. Local boards of education have the option of offering public review of textbooks before screening by the committees. One estimate is that approximately 40 percent of the local boards offer public review, but that overall public response is low. Tennessee is unique in that the State Department's position in monitoring the adoption process is less active than in other states. Local systems are required by law to submit two reports to the Commissioner: one stating which books they have adopted and the other indicating the number of textbooks available per student. Since local systems buy directly from the book depository, monitoring is performed by the state through an analysis of the textbooks furnished report and spot checks of shipping invoices received from the depository. In their final reports, systems are required to account for the amount of funds expended for textbooks.

The present almost open-ended adoption process at the state level assures local systems more autonomy in the selection of textbooks for their students. However, some see the large number of textbooks from which to choose at the local level as resulting in selections of poor quality and creating statewide a diversity of educational opportunity. Some of the arguments for and against the present textbook adoption process are listed below.

Arguments in Favor of Present Textbook Adoption Process

1. ensures more local control of selections
2. prevents pressures from publishers at state level (little or no politics in process in Tennessee compared with other states)
3. provides more choices for various academic levels in any one grade
4. allows for selections to accommodate wide cultural diversities in the state

5. preserves academic freedom
6. assures a balance at local level between professionals (teacher-committees) and lay persons (local board members) in making final selections.

Arguments Against Present Textbook Adoption Process

1. provides insufficient and inadequate screening of quality at state level
2. allows too many books at local level for committees to screen properly
3. does not provide enough time for adequate review at either state or local level
4. ensures input from professionals (teachers) at local level, but not enough from parents
5. creates wide diversity in textbooks used statewide
6. prevents the state from monitoring what is actually purchased by the local systems.

Textbook Reading Levels. In an attempt to determine the "challenge level" of the textbooks available for adoption in the state, publishers of textbooks listed on the official state textbook list were asked to provide the reading level of their books in each subject area offered for grade 6. Grade 6 was chosen because it is the median year of K-12 schooling and appears to be on the edge of student declines in achievement. Responses from the publishers indicated a wide range in the reading level of books available for adoption for sixth graders as follows:

Subject	Reading Level (Grade Equivalent)
Mathematics	3.774 to 5th-6th
English Grammar and Composition	4th to 5th-6th
Spelling	5.5 to 5th-6th
Reading	4.58 to 6.2
Science	4th to 7th
Social Studies	4th to 5th-6th

Two publishers did not respond to the request, but it is obvious from the replies of those who did that a wide range of difficulty is found in the textbooks which LEAs can adopt. Responses found on the K-12 Survey indicated that parents and educators alike considered the content of most of the textbooks used in their schools good to fair.

Educational Technology

Computer Utilization. At the state level, a computer advisory committee has been appointed to investigate computer utilization in the state and to help improve computer literacy in Tennessee. The committee is composed of representatives from the State Department of Education, local school systems, and the higher education community. A survey of computer utilization in the public schools was undertaken by the committee in February. Since the survey is incomplete, final results were not available to this study. However, a preliminary report indicated a number of schools using computer-assisted instruction in the areas of Reading, Mathematics, Science, Social Studies, and Language Arts.

School systems were asked to identify areas in which the State Department could be of help in present and future computer developments. The areas ranked in order of importance were: conduct workshops, develop a list of locations where good computer usage can be seen, publish a microcomputer newsletter for schools, develop software, develop a list of computer resource people, and evaluate hardware. Comments on other needs included the need for: funding for computers; expanding software, texts, and supplemental materials; adopting texts and more materials; Computer Science; free college course tuition for staff; training for office staff; school board and teacher awareness of need; training for classroom use; software exchange; and setting up computers to replace study halls.

Responses on the K-12 questionnaire showed that 84 percent of the educators and administrators would like to see the use of computer-managed and/or computer-assisted instruction increased in their school districts. Their opinions of the future potential of computer-managed instruction for assisting the teaching process were mixed. Superintendents/board members and principals/ supervisors thought the potential was greater than either parents or teachers.

Educational Television (ETV). Educational television in Tennessee was examined by a special subcommittee of the House Education Committee in 1980 and the funding and organization of ETV were changed as a result of the study. Since the reorganization occurred fairly recently, this study did not examine the usage or quality of ETV in the state. However, two questions relevant to ETV were included in the K-12 survey, and the responses are of interest. When asked to evaluate the use of educational television as an aid to student learning, all groups (72 percent) rated it fair to poor with principals/supervisors and superintendents/board members considering ETV less beneficial to learning than either parents or teachers. Educators were also asked if they would like to see ETV used more for classroom instruction. The responses showed that 46 percent of the total group thought its usage should stay the same and 37 percent would like to see ETV used more. Teachers favored increased usage more than the other groups.

Teacher Preparation and Certification

State Requirements. All prospective teachers must acquire a valid certificate to teach in the State of Tennessee. Certificates are issued by the State Department of Education in accordance with rules and regulations promulgated by the State Board of Education, which are periodically reviewed and updated by the State Board to maintain high standards for the certification of professional teaching personnel in Tennessee.

To renew the professional certificate based on the bachelor's degree, Tennessee requires that the educator teach a minimum of five years and complete eight quarter hours of undergraduate or graduate course work. The undergraduate course work must be either in professional education or in the subject matter area of the endorsement on the certificate. For renewal of a certificate based on a master's degree, Tennessee requires that a teacher present evidence of having taught at least five years of the ten-year duration of that certificate. In the absence of such experience a teacher must earn eight quarter hours of credit within the last year before renewal.

As previously stated, a review of the certification manuals of the fourteen SREB states revealed that in terms of course work preparation for teaching, requirements among the various SREB states are quite similar. At the elementary level there appear to be no substantive differences in the preparation of teachers. It should be noted, however, that part of the certification requirements for teaching at the elementary level includes the teaching of reading. Each elementary school teacher is required to have three to six semester hours of the teaching of reading in the elementary school depending on the state in which certification is sought. The Tennessee requirement presently stands at four semester (six quarter) hours of credit in the teaching of reading.

A review of the subject area endorsements at the secondary level revealed substantive differences in the number of hours of credit required for certification in specific areas. The following table presents a comparison of the number of credit hours required for certification in Tennessee with the mean number of credit hours required in nine other SREB states.

	Eng.	For. Lan.	Math	Bio.	Chem.	Earth	Phy.	Soc.
Mean hours of credit 9 SREB states	29.3	27	24.8	25.4	24.8	34.5	25.1	36.7
Hours of credit Tennessee*	24	18	18	16	16	16	16	30

*Note: Hours are expressed in semester credits. Tennessee requirements have been converted to semester hours.

The differences presented in the table above are illustrative of the variations of course work requirements in Tennessee as compared to those requirements in other SREB states. It is appropriate that such differences be reviewed and addressed as to whether such differences impact positively or negatively on teacher preparation in Tennessee.

Survey Opinions. Several questions on the K-12 questionnaire pertained to the personnel issues of teacher preparation and certification requirements. The responses are significant. All groups (professionals and parents) strongly agreed that students in teacher preparation programs should receive more field experience (classroom teaching) in college; that teacher

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preparation programs should place more emphasis on subject matter; that graduates of teacher preparation programs should serve an apprenticeship program before receiving professional certification; that graduates of teacher preparation programs should be qualified to teach in more than one specialty area (e.g., science, math, etc.); and that graduates of teacher preparation programs should be required to pass a test which measures their knowledge in their specialty area before receiving certification.

Parents (83 percent) strongly agreed that periodic testing of professionals should be required for certification renewal, but the teachers (73 percent) and principals/supervisors (66 percent) disagreed with this requirement. Board members and superintendents were fairly evenly divided on this issue with 55 percent agreeing and 45 percent disagreeing. More than 60 percent of the educators disagreed with the possibility of letting graduates in science and mathematics teach at the secondary level without professional preparation. Parents were fairly evenly divided on this issue. Over 70 percent of the parents and the superintendents/board members thought that teachers were receiving adequate training for handling the mainstreaming of handicapped students in the regular classroom, but more than 80 percent of the teachers and principals did not think so.

Since the General Assembly mandated proficiency testing of persons seeking certification to teach, educators were asked to indicate what test they would prefer. The tests ranked in order of preference were:

1. National Teacher Common and Areas Exams (where available)
2. a state-developed test
3. National Teacher Common Exam
4. none of the tests listed

5. Graduate Record Exam
6. California Achievement Test.

All educator groups strongly agreed that Tennessee's certification requirements should be similar to the requirements of other southeastern states.

Inservice Education

According to guidelines recently promulgated by the Tennessee Department of Education, inservice education is defined as a program of planned activities designed to increase the competencies needed by all certificated personnel in the performance of their professional responsibilities. As previously noted, school systems are required by Tennessee law to maintain a school term of not less than 200 days per year with a minimum of 175 days for classroom instruction, ten (10) days paid vacation, and "ten (10) days in-service training, according to a plan recommended by the local superintendent of schools and adopted by the local board of education . . ." (T.C.A. 49-1709). State law further requires local school systems to submit copies of their inservice plans to the Commissioner of Education by September 1 of the current school year for his approval. Use of the five (5) days remaining of the 200 day term may be designated by the local board of education (T.C.A. 49-1709).

As part of the regulations governing school approval, the State Board of Education requires each school to "develop and carry out a program of inservice education designed to improve the school curriculum and promote the continuous growth of all personnel" (Tenn. State Bd., 35). The plan must be a part of and in accord with the inservice education plan for the entire school system.

In addition to these legal mandates, state guidelines recommend certain procedures for local education agencies (LEAs) to follow in setting up a plan for the Commissioner's approval. The guidelines call for a system-wide inservice planning committee in each system to be composed of the superintendent or his designee, an instruction supervisor, a principal, and a teacher. LEAs are urged to involve college or university consultants, parents, and appropriate agencies, if possible, in the planning and implementation. The guidelines further designate approvable activities and nonapprovable activities for inservice credit and suggest the following sequence for developing inservice education programs: (1) assess needs, (2) establish priorities, (3) develop objectives, (4) design inservice activities, and (5) evaluate. According to the guidelines, each school system's inservice plan for the next school year must be submitted by May 15 for the Commissioner's approval.

Each local plan is reviewed by a district staff team and then by a Central Review Committee composed of both Department of Education and local education agency representatives. If the plan does not meet established criteria, it is either not approved or conditionally approved. If either condition exists, a letter is sent to the local school system identifying the areas which are unacceptable, with suggestions as to how the activities can be revised and altered to be in compliance.

Tennessee was one of the first states to stress the importance of curriculum improvement by initiating paid inservice education and has had ten days of inservice education with pay since 1957. Significant progress has been made in inservice education in the state since 1957, and approximately $24 million dollars is provided annually for approved inservice activities.

The foregoing mandates and expenditures are evidence of the state's interest in and commitment to continued staff development to aid in improving the quality of instruction in Tennessee. The extent to which this ideal becomes a reality is another matter and the responsibility for this rests primarily with local boards of education, superintendents, and local school personnel. When asked on the K-12 Survey if the time and the amount of money spent on inservice training days were well utilized, teachers disagreed more than any other group. About 51 percent of the survey population thought they were well utilized, but 49 percent did not.

Personnel Evaluation

House Joint Resolution No. 227, adopted by the Eighty-Seventh General Assembly in 1972, directed the Commissioner of Education "to study and develop the best possible formula for evaluating the compensation of elementary and secondary school teachers as well as determining whether or not it is desirable to retain teachers in our elementary and secondary educational system" (Tenn. Public Acts, 1972). An ad hoc committee, appointed by the State Board of Education, conducted a statewide survey of teacher evaluation practices, reviewed the state tenure law, and examined procedures in school systems across the nation. The committee concluded that mandatory evaluation would strengthen the tenure law, upgrade professional personnel, and could be an important factor in improving the quality of instruction. The report and recommendations of the committee were adopted by the State Board in 1973 and laid the foundation for present evaluation requirements mandated by the State Board (Task Force, 1974, 1-2).

State Board requirements for evaluation of personnel are as follows:

(a) Local boards of education shall develop evaluative procedures for all professional school personnel. The evaluative procedure shall be designed for the purpose of improving the instructional program. The Evaluative Criteria shall be on file with the Commissioner of Education.

(b) Annual evaluation shall be made of probationary teachers with tenure teachers being evaluated once every three years. Tenure teachers may be evaluated on a staggered basis (Tenn. State Bd., 49).

Evaluation required by the State Board began for probationary teachers in 1974 and for all professional personnel in 1975-76. Shortly after the State Board adopted the evaluation requirement in 1973, a Task Force on Professional Evaluation of the Superintendents' Study Council, aided by staff from the State Department of Education, developed a set of guidelines for local boards of education to use in developing evaluation policies, criteria, and procedures and to use in improving existing evaluation programs. The guidelines were "viewed as an interim solution to a critical problem imposed in terms of time," and the Executive Committee of the Superintendents' Study Council urged continuous review and revision of the guidelines and the philosophy expressed in the document (Task Force, 1974, i).

These same guidelines are recommended by the Department of Education at the present for use by local school boards in developing evaluation procedures. The type of instrument, the evaluative criteria, and the methods used are left to the discretion of each local board. A copy of the instrument used by each local school system is filed with the Commissioner, and these vary greatly throughout the State. Some are quite lengthy, others are only one page; various criteria and methods are used also. Similarly, wide variations occur in the usage of evaluation results in the 147 school systems. In some, the results are used for professional growth and development to aid in improving instruction; in others, evaluation is used as a tool for dismissing personnel; and in others, personnel evaluations are simply filed away.

Respondents to the K-12 Survey were asked if they agreed that uniform evaluation policies for all local school personnel should be established and monitored at the state level. This question received a somewhat mixed response; 47.9 percent agreed and 52.1 percent disagreed. Parents expressed the strongest agreement with 70 percent agreeing. Approximately 61 percent of all respondents thought the present tenure policy tended to prevent elimination of incompetent groups. Parents, superintendents, and board members agreed strongly, but teachers, principals, and supervisors were divided on this issue.

Teacher Pay

Superintendents, principals, system-wide personnel, and teachers in Tennessee are paid according to a minimum salary schedule based on training and experience that is established annually by the State Board of Education. County superintendents receive an additional salary increment based on the average daily attendance (ADA) of the school system, and principals are paid an additional six dollars per month for each full-time teacher under their supervision up to twenty full-time teachers. In addition, local school systems are required to pay a salary supplement of $1,145 (for 1982-83) from local funds to certified degreed classroom teachers and principals. A required local salary supplement is mandated by the General Assembly each year.

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Local systems can increase the salaries of school personnel to any amount with local funds above the state-required salary and the mandated local supplement. For the 1981-82 school year, the average annual salary statewide for all instructional personnel was $16,581.52. The salaries of all certified personnel except superintendents' and their assistants' were included in this average. By system, the average salaries of all instructional personnel ranged from $12,415 to $20,823. Average salaries for most districts were somewhere between $13,000 and $16,000 plus. Twenty districts had average salaries for all instructional personnel over $17,000 and in four districts the average salary was $20,000 plus.

Comparative data show that Tennessee's average annual salary for instructional staff ranked 42nd in the nation in 1980-81. It is estimated that Tennessee will rank 41st in the nation for the 1981-82 school year. Statistics also indicate that Tennessee ranked 17th in the nation in the percentage increase in average salaries for instructional staff from 1970-71 to 1980-81. This increase was 98.04 percent. Tennessee ranked 10th among the fourteen SREB states in 1980-81 in average salaries for classroom teachers only (NEA, 1980-81).

All groups surveyed assessed the salaries paid the teachers in their school districts as fair to poor. Superintendents and board members thought teachers' salaries were better than other groups thought they were. The consensus of all groups was that the average Tennessee teacher's salary should be equal to the average teacher's salary in the states bordering Tennessee (adjusted for tax burden and cost of living). All groups agreed that the experience factor in the State Minimum Salary Schedule should be extended beyond fifteen and sixteen years for certified personnel and county superintendents, respectively. The superintendents and board chairmen agreed less than others on this item. There was general agreement among the educators that the add-on factor for a principal's salary should be increased, but 35 percent of the teachers disagreed.

All educator groups (90 percent) strongly favored increased funding of teachers' salaries by the state. Teachers, principals, and supervisors were in favor of increased local funding of teachers' salaries, but superintendents and board chairmen did not favor this idea as much as the others.

When asked if extra pay or some other bonus should be awarded to outstanding teachers on a merit basis, 55 percent of the respondents agreed. Superintendents, board chairmen, and parents favored this idea more strongly than teachers, principals, or supervisors.

School Approval and Accreditation

As previously noted, Tennessee law assigns the State Board of Education the duty of prescribing regulations for the approval of all public schools, K-12. Private schools may request state approval, but this requirement is not mandatory. Waivers may be granted by the Commissioner to schools which do not comply with state regulations. The Commissioner cannot issue waivers for the same violation to the same school for more than two years in succession unless he feels local boards of education need additional time to fund the needed correction.

State Board requirements for school approval are described as "minimum standards" and are listed under the following broad topics:

Requirement A	State Curriculum Framework
Requirement B	Organization of Schools (length of school term, school day, and organization of school program)

Requirement C	Administration of Schools
Requirement D	Certification and Evaluation of Teachers
Requirement E	Graduation
Requirement F	Instructional Materials Services
Requirement G	Pupil Personnel Services
Requirement H	Special Education Programs and Services
Requirement I	School Site, Building, and Equipment
Requirement J	School Emergency Preparedness Plans

Some requirements have been mandated by the General Assembly; some are required by federal regulations and guidelines; and others are set by the State Board. Class size limits under Requirement C, established by state law and State Board regulations, are as follows: Kindergarten--25 pupils; Grades 1 through 3--25 pupils; Grades 4 through 6--30 pupils; and Grades 7 through 12--35 pupils (T.C.A. 49-603).

LEAs are required by law to submit requests for waivers before November 15 of the school year; waivers for failure to comply with required class sizes may be requested later. In 1981-82, the following waivers were granted under each requirement: State Curriculum Framework, 4; Organization of Schools, 1; Administration of Schools (over-size classes), 4,605; Certification and Evaluation of Teachers, 120; Special Education Programs and Services--Program, 6, Facilities, 48; Buildings, 207; and Vocational Education Certification, 13.

During the 1982-83 school year, local school systems will be required to complete eight different forms (reduced from eleven in 1981-82) throughout the year to attain school approval. Since school approval is a joint undertaking between local systems and the Department of Education, the forms are intended to be used by local education agencies for self-evaluation as well as to meet legal and State Board requirements. These eight forms represent only a small portion of the 100 plus forms LEAs are required to complete for various state and federal regulations. Local systems are encouraged to develop a data bank of information for future improvement plans; one form, the Analysis and Plans, remains in the LEA office for this purpose, and only a compilation sheet is sent to the Department. The approval procedure is designed to involve the LEAs in governing themselves and to provide minimal monitoring by the Department.

The Department of Education is reviewing present school approval procedures and has adopted an improvement plan to be completed over a three year period. Phase III, to be completed by 1984-85, calls for a complete computerized school approval procedure and a system of approving schools on a rotating basis, with all schools being approved at least once every three years.

For the 1981-82 school year, 134 private elementary and secondary schools were approved by the State Department of Education. Even though state approval for nonpublic schools is voluntary, such schools are required to meet state standards if approval is granted.

In response to a question on the Needs Assessment of the K-12 Survey, 78 percent of those persons involved in public education thought the present state school approval process and the issuing of waivers should be revamped. Teachers were the most positive group with 87.9 percent agreeing. The professionals were even more emphatic that state approval of nonpublic elementary and secondary schools should be mandatory with 83 percent favoring this requirement. All of the local educators and administrators strongly agreed that the State Board of Education should develop policies for the operation and approval of public schools, but should leave the administration of the schools to local school officials. Parents were not asked to respond to these questions.

Tennessee public schools may seek accreditation by the Southern Association of Colleges and Secondary Schools (SACS) if they desire. The process takes approximately a year and a half and calls for an evaluation five years after accreditation and a reevaluation after ten years. At the present time, 478 elementary and secondary public schools in the state are accredited by SACS.

Schools desiring SACS accreditation must first get the approval of the faculty, the principal, the superintendent, and the local board of education. After application to the State SACS Committee, a school must go through a year long self-evaluation using evaluative criteria adopted by the National Study of School Evaluation. The self-study is aided by a consultant appointed by the state committee who helps the school develop a plan for continuous improvement. During the year, visitations are made by a visiting committee to observe the school in operation. Schools are judged and evaluated on the basis of their functions and purposes. Each school's particular purposes, general purposes for all schools, and the standards of the Commission on Secondary Schools, all together, become the criteria by which the quality of a school is judged and accreditation is then granted (Com. Sec. Schools, SACS, 1980). Since each school is evaluated by its individual purposes reflecting the needs of the community it serves, wide variations can occur in schools accredited by SACS.

Conclusions

In attempting to assess the present quality of instruction found in Tennessee's public schools, several difficulties were encountered. Chief among these was a lack of statewide test data available at the state level. All LEAs use various procedures to assess student achievement, but the state does not have a statewide assessment program except the State Minimum Proficiency Test. This test can be interpreted only in terms of how well students have mastered the fifty objectives of the test. For the purpose of comparing the achievement of Tennessee students with national norms, little statewide data were available. The data in the preceding section on Student Attainment provided the only information that could be utilized in assessing the quality of instruction based on achievement in grades K-12 in Tennessee.

After a review of what data were available, an overall need for improvement in achievement at all levels was found, particularly in the junior and senior high grades. The greatest need for improvement in the upper grades appeared to be in Reading and Mathematics and in the middle grades in Social Studies, Science, and Reading. The study acknowledges the fact that students in some school systems are achieving at or above national norms, but it was found that the average Tennessee student is achieving below grade levels in Grades 6 through 12.

Another problem encountered in assessing the overall quality of instruction was the lack of information at the state level on curriculum offerings statewide, the level of difficulty of textbooks adopted by local systems, and inservice education practices and evaluation procedures used by LEAs. Based on findings in these areas, there is evidence that wide variations in these school factors throughout the state definitely affect student achievement at all grade levels and the overall quality of education in the state.

Other factors which may be directly related to the educational quality of K-12 are state curriculum requirements, present subject matter requirements for students in teacher preparation courses, and state certification requirements. Factors which may or may not be directly related to the present quality of K-12 instruction, that were identified by the study, are teacher pay and school approval procedures.

B. Quality in Special Education Programs Serving Children and Youth with Handicapping Conditions*

> A quality educational program for a school district is one that teaches all children in that district well--not just the easy to teach, not just the well-mannered, not just the middle income or rich, not just the majority race--but all children. That is a difficult and costly enterprise, but it is the promise of a publicly supported education system in a democratic society (Tompkins and Kaeser, 1978, iii).

Special education programs for handicapped students in Tennessee schools have been topics of controversy among legislators and administrators in recent years. Some policymakers have complained about the costs of these programs, while others have pointed out the cost savings to society when children are educated in public schools rather than "warehoused" in state institutions. Some policymakers have expressed concern about the problems involved in bringing difficult-to-serve children into the public schools, while others have noted the beneficial results that can occur for these children, their families, and nonhandicapped students when conscientious efforts are made to include all children in the life of the school. Some policymakers have supported the philosophical concept of special education but have raised questions about the practical implementation of special education programs and policies.

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*This section is a condensation of a paper written by Mrs. Susie M. Baird, M.Ed., Vanderbilt University, Nashville, Tennessee, for the Tennessee Comprehensive Education Study.

The purpose of this section is to dig beneath the controversy and to examine the central purposes and functions of Tennessee special education programs. Why, after all, do we have special education? What is the role of special education in the Tennessee public school system? How has this role evolved, and what are its political roots? A discussion of these questions should serve to clarify the issues surrounding special education programs and to set the stage for a consideration of quality.

The Role of Special Education in the Tennessee Public Schools

Views on the meaning and mission of public education have undergone significant revision in the past 150 years. "Equal educational opportunity," initially a populist concept, was historically interpreted to mean that schools should simply be open to all, with the responsibility for taking advantage of educational offerings resting squarely on the child. Those who had handicaps or special health problems were often "excused" from schools on the basis that their "bodily or mental conditions rendered attendance inadvisable" (Alaska Statutes, 1971).

These attitudes changed somewhat during the 1960s, as an emphasis on compensatory education grew along with President Johnson's Great Society programs and policies. The concept of equality of educational opportunity

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changed to mean "equal access to differing resources for equal objectives," with the assumption being that if only appropriate compensation were provided, then children from poor environments could achieve the same levels of academic success as those from middle-and upper-class backgrounds (Weintraub and Abeson, 1976).

Gradually the recognition grew that "equality of results" might not be an attainable goal for a number of students, however, and in the 1970s the emphasis shifted to "equal access to differing resources for differing objectives" (Weintraub and Abeson). Court decisions during this period established the principle that handicapping condition, like race, was insufficient reason for excluding persons from public schools. The basis for these decisions was the equal protection clause of the 14th Amendment to the United States Constitution, which holds that the rights of all persons must rest upon the same rules under the same circumstances, both in privileges conferred and liabilities imposed; what is afforded one must be afforded all. This principle found expression in a number of court decisions of the early 1970s (e.g., Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania, Mills v. Board of Education of District of Columbia). The Mills case is especially interesting because the federal court ruled that lack of funds is no excuse for failing to provide services to students with handicapping conditions.

A significant influence on the movement to bring persons with handicaps into the public schools was civil rights legislation of the 1960s and early 1970s. The Congress addressed the issue of civil rights for the handicapped in Section 504 of Title V of the Rehabilitation Act of 1973, which prohibits discrimination against persons with handicapping conditions in any program or activity that is supported in full or in part by federal funds. According to

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the regulations published in 1977, the intent of Section 504 was establishment of a mandate "to end discrimination and to bring handicapped persons into the mainstream of American life" (Fed. Reg., 1977, 22676).

With all this activity going on in other parts of the country, what was happening in Tennessee? In the early 1970s Tennessee was one of a handful of states drafting legislation for the education of handicapped children. Chapter 839, passed by unanimous vote of the 87th General Assembly in 1972, was widely considered to be model legislation by educators, advocates, and parents around the country; it was codified as Sections 49-2912 through 49-2959, Tennessee Code Annotated.

In the fall of 1975 the Congress passed Public Law 94-142, guaranteeing all handicapped children a "free appropriate public education which emphasizes special education and related services designed to meet their unique needs" [20 USC 1401, Sec. 3 (c)]. Regulations published in 1977 defined more precisely the responsibilities of state and local education agencies in delivering special education and related services to children considered "handicapped." Public Law 94-142 established important policies regarding the education of children with handicapping conditions. The most fundamental was a "zero reject" policy which stated that all children, no matter how severe their handicaps, were to be served by public schools.

Advocates for handicapped children have expressed concern about the view held by some members of the public that special education is a "frill" and not really part of the overall mission of the schools. Hersh and Walker summarize this issue as at least partially the result of federal mandates and clumsy administrative structures:

> In not being integrated with the schools' larger mission, education for handicapped children has for the most part been externally funded, externally directed, and imposed on the school system! This has resulted in adding special

> education to an array of services as long as it can pay its own way or is legally mandated. In this context, special education can hardly be viewed as part of an integrated service system. Instead, this posture has frequently caused special education to be viewed as "a nice service if you can afford it" (Hersh and Walker, 1982, 3).

Persons concerned about the education of students with handicapping conditions have suggested that a more appropriate approach might be to consider the educational system as a continuum, with special education simply a part of that whole. Chapter 839 explicitly defines the place of special education within the overall mission of schools in Tennessee:

> It is the policy of this state to provide, and to require school districts to provide, as an integral part of free public education, special education services sufficient to meet the needs and maximize the capabilities of handicapped children. . . . This section applies to all handicapped children regardless of the schools, institutions or programs by which such children are served (T.C.A. 49-2912).

Because the Tennessee General Assembly and the United States Congress have enacted a policy that all children are to be eligible for publicly supported education and that special education is to be an integral part of the overall mission of the schools, we have seen significant reductions in numbers of children institutionalized and significant improvements both in special education techniques and in indicators of family satisfaction (Baird, 1982). Although administrators may disagree with respect to how this "zero reject" policy should be implemented, the fact remains that the policy statement itself has influenced public attitudes and has increased opportunities for persons with handicaps and their families. More flexible administrative structures and more creative and consistent efforts on the parts of schools and communities may be necessary before the concept of special education as an integral part of public education becomes universally accepted.

Considering the legal, political, and social rationales for the existence of special education programs in Tennessee, the following central purposes are proposed for these programs:

1. Educational: To contribute to the common welfare by providing special educational opportunities for those students whose learning needs cannot be met adequately in regular public school classrooms so that they can develop their capacities for becoming more productive members of society.
2. Noneducational: To operate an efficient, cost-effective, and productive system of educational services for Tennessee students who have handicapping conditions.

Characteristics and Indicators of Quality In Special Education Programs

From a review of the literature on special education goals, on relevant court decisions, and on public responses to special education, six essential functions emerge for Tennessee special education programs serving children and youth with handicapping conditions. Indicators most consistently associated with programs that successfully fulfill these six functions were identified through a combination of evaluative judgment and inferences from available research data. Where appropriate, descriptions of selected Tennessee special education programs are included as illustrations of how quality is being achieved in a number of schools in our state.

Essential Function 1

Tennessee special education programs should teach students with handicapping conditions the skills necessary to participate more independently and more effectively in family and community life.

Courts in the past ten years have repeatedly ruled that education may be broadly defined and may include development of adaptive behaviors and other skills necessary to equip a child with the "tools needed in life" (Fialkowski v. Shapp, 1975). An essential function of special education programs, then, is not necessarily to "cure" handicapped students, although many children can return to regular classrooms after a period of time in special education, and many others can participate in regular classrooms with support from part-time special instruction.

Rather, an essential function of special education programs is to teach students with handicapping conditions whatever skills they need to function more independently and more effectively in their families and in their communities. If an essential function of these programs is to teach new skills, then an important outcome is that students learn. No suggestion is made here that total self-sufficiency is the only acceptable outcome for all students in special education programs. However, we should expect that if our programs are effective, most students will grow and develop in some observable and measurable ways, no matter what their handicapping condition.

The following indicators are typically associated with improved student learning outcomes:

a. Special education mandates. Although special education laws are unpopular with some administrators, the fact that these laws exist is a powerful force in modifying school conditions so that handicapped children can learn. Hersh and Walker point out that "mandated changes in educational practice and political, legal, and financial incentives . . . seem to account for most of the beneficial changes occurring in the education of handicapped children" (Hersh and Walker, 2).

b. Teacher concern for order and organization. Glass points to concern for order and organization in the classroom as a key variable in promoting student achievement (Glass, 1982).

c. Appropriately high teacher expectations for student progress. A number of researchers point out that teachers who view the classroom as a workplace and who incorporate into their routines appropriately high expectations for student progress are effectively setting the stage for learning to occur (Glass).

d. Careful, regular assessments. Cohen observes that a critical factor in effective school programs is a "system for monitoring and assessing pupil performance which is tied to instructional objectives" (1982, 15). In Tennessee full evaluations are to be conducted for each special education student every three years; the small number of school psychologists available in many areas has created a long waiting list for services. Nevertheless, some teachers regularly assess students' performance with either their own or commercially available assessment instruments. Such an ongoing activity is essential for bringing about improved student learning outcomes.

e. Development of appropriate student goals and objectives. Public Law 94-142 requires that an Individualized Education Program (IEP) be developed for each special education student. Included in the IEP are statements of annual goals and short-term instructional objectives. Educators have noted that student learning outcomes are more apt to be positively affected if goals and objectives are written in behavioral terms--that is, the goals are observable and measurable. In addition to being stated in behavioral terms, student goals and objectives should be both functional and age appropriate. Brown and others have suggested that teachers selecting goals for special education students should employ the "Criterion of Ultimate Functioning"--that is, if the student cannot do this task, will someone have to do it for him (Brown, et al, 1979)?

f. Curriculum around which IEPs can be systematically developed. Another indicator of improved student learning outcomes is a curriculum which teachers and parents can use in developing IEPs. Such a curriculum should organize activities in a purposeful direction, yet allow teachers the flexibility to individualize activities according to students' particular needs and learning styles.

g. Appropriate teacher-pupil ratios. A deterrent to improved student learning outcomes is inadequate teacher-pupil ratios. If students have handicapping conditions sufficient to suggest their removal from regular classes on a part-time or full-time basis, then it stands to reason that they will need a more intensive teacher-student ratio than that usually found in regular classes.

h. Appropriate daily instructional time. In a recent study Fredericks and his colleagues demonstrated that 65 percent of the variance in gains made by two groups of severely handicapped students was attributed to the number of minutes of classroom instruction provided each day (Fredericks, 1978).

i. Careful and accurate record keeping. As suggested earlier, no meaningful assessment of student progress can occur unless careful and accurate records are kept to compare student performance at various stages of the school year. The Program for Autistic Students (PAS) in the Metropolitan Nashville Public School System offers an example of careful and accurate record keeping. Daily charts and graphs are kept for all students on all learning objectives; parents and others can examine these records and determine readily the patterns of progress that are occurring.

Essential Function 2

Tennessee special education programs should encourage handicapped students to participate actively in normal school functions and should foster among all students an increased awareness of and appreciation for "differentness," in whatever form.

Social integration goals are clearly important concerns for both special and regular educators. Several recent court decisions have addressed this issue. In Pehowski v. Blatnik (1980), a West Virginia court held that categorically placing students designated as trainable mentally retarded into segregated schools violated both Public Law 94-142 and Section 504 of the Rehabilitation Act of 1973; social integration, where possible, had a highly regarded educational value which could not be categorically deprived. In Hairston v. Drosick (1976), the court held that the defendant school district violated Section 504 by refusing to allow a child with spina bifida to participate in a regular classroom program.

Both Public Law 94-142 and Chapter 839 address the subject of integrating handicapped and nonhandicapped students, which is sometimes called "mainstreaming." The legal term for this activity is "least restrictive environment," which has a meaning somewhat different from that popularly attached to the term "mainstreaming."

The intent of the least restrictive environment provisions is to prevent the categorical exclusion of children with handicaps from the mainstream of the regular school environment. Some administrators have interpreted these provisions to mean that most, if not all, handicapped children should be mainstreamed. The intent of the law, however, is not to mainstream all handicapped children but to educate children in the least restrictive environment (Gresham, 1982, 430).

To educate a child in the least restrictive environment means that administrators carefully consider what particular school setting is "least restrictive" for meeting the needs of that particular child. True "mainstreaming," therefore, can take a number of different forms. In some instances it may involve placing handicapped students in regular classrooms. In other instances it may involve simply planning opportunities for handicapped and nonhandicapped students to interact, whether in the classroom or in the lunchroom or on the playground.

An innovation begun in some schools is that students who need full-time special education programs attend "self-contained" classrooms: that is, their class may be composed entirely of students with handicapping conditions, yet may be located within the regular school. In other communities, such as Dickson, handicapped students attend classes in a building adjacent to the regular schools and "mix" with nonhandicapped students at lunch and on other occasions.

If an essential function of special education programs is to encourage interaction between students of varying ability levels, then a characteristic of programs that accomplish this function is educational and social integration of handicapped students with nonhandicapped peers. The following indicators are associated with successful achievement of this function.

a. Structure of schooling. As might be implied from the previous discussion, an indicator of effective educational and social integration of handicapped and nonhandicapped students would be a positive and planned school structure. In the Memphis City Schools, some of the children participating in a special education program for students with communicative and behavior disorders attend Evans Elementary School, which is a regular school in a typical suburban neighborhood. The self-contained classes are located near the entrance to the building, rather than in a remote corner; students attend assembly programs and other school activities just as all other students do. Teachers in the program have initiated a special peer tutoring activity in which selected fifth and sixth graders teach, with supervision, students in the special education classes.

A number of counties are moving toward the concept of self-contained classes within regular schools. Robertson County and Giles County have done so in response to state monitoring activities, while Maury County has done so in response to a complaint filed with the Office of Civil Rights.

b. Physical factors, such as location and accessibility of classrooms. Closely related to the structure of schooling is the physical location of classrooms. Administrators who place special education students in surplus, "leftover" classrooms in surplus, "leftover" buildings equipped with surplus, "leftover" supplies are making a clear statement about the importance they attach to these children and their education.

In 1979 the Comptroller of the Treasury completed an audit of educational programs for handicapped children in Tennessee. The report cited findings of classes being conducted in hallways, behind school stages, and even in restrooms. A problem frequently mentioned is that special education has no money appropriated for capital improvements, such as constructing or renovating buildings. Until special education students can attend school in classroom facilities comparable to those used by regular education students, however, it seems unlikely that real educational and social integration can occur.

c. Instructional emphasis on social competence. Recent research on mainstreaming has indicated that a critical factor in the success of the enterprise is the child's social behavior: that is, "those behavioral skills and competencies that contribute to a successful classroom adjustment and that facilitate the development of interpersonal skills and social competence" (Hersh & Walker, 9). Researchers have pointed out that children's overt social behavior is a more powerful influence on peers' attitudes than their "label" or handicap (Gottlieb, 1981). They have noted that handicapped children can be taught to behave in more socially appropriate ways, just as regular class students can be encouraged to develop more accepting attitudes (Gresham, 1982).

d. Integration of regular education and special education personnel. It seems clear that regular education and special education personnel have much to offer each other. Simpson points out that establishment of rapport between special class and regular class teachers is a prerequisite to creating a climate in which positive attitudes are encouraged (Simpson, 1980).

A number of efforts have been made in Tennessee to bring regular and special educators together. The Knoxville City School System has participated in a project designed to train regular teachers in their own schools and classrooms to teach students with handicapping conditions. An interesting by-product of the project has been that regular educators have applied many of the methods learned to their entire classrooms, thus illustrating the potential benefits that can occur when regular and special educators have the opportunity to teach and learn from each other.

In recent years the Division for Education of the Handicapped in the Tennessee Department of Education has sponsored two "Conferences in the Glade," one in 1980 and one in 1981, for the purpose of addressing personnel preparation issues. Both regular and special educators, as well as administrators and representatives of Tennessee colleges and universities, have attended these meetings. Such an effort seems to be an important step in building bridges between regular and special education personnel and in focusing attention on joint learning and problem-solving activities.

e. Strong administrative leadership and support. Clearly there is little that individual teachers can do to accomplish successful integration of handicapped and nonhandicapped students without the strong support of administrators. A number of research studies point to the importance of principals and other administrators in creating a climate in which healthy interaction can take place (Simpson, 1980).

Essential Function 3

Tennessee special education programs should incorporate the family in making decisions about and carrying out educational programs for students with handicapping conditions.

Public Law 94-142 structures a unique role for parents in planning children's educational programs. Local education agencies may not hold Individualized Education Program (IEP) meetings without parents unless they can document that they have tried to contact the parents by telephone, by correspondence, and by visiting the parents' home or place of employment. When necessary, arrangements must be made for conducting meetings in the parents' native language or with the help of an interpreter. In addition to being full participants in IEP meetings, parents have due process rights for appealing educational decisions with which they do not agree. The specificity of these requirements illustrates the importance that framers of the law attached to parent participation in educational programming.

If an essential function of Tennessee special education programs is to include the family, then a characteristic of programs that accomplish this function is active parent participation. The following indicators are most frequently associated with this characteristic.

a. Systematic encouragement of meaningful parent involvement. Meaningful parent involvement suggests making conscientious efforts to work with parents to develop a combined home-school program that will more effectively meet the needs of the child. Meaningful parent involvement implies listening to parents as well as talking to them. Jan Hodgson, a special education teacher in the Clarksville-Montgomery County Schools, has encouraged parent involvement by organizing a support group for parents of students in her class. She meets with parents one evening each month to discuss problems about which they are concerned. In addition, she visits parents during the summer to offer assistance with home activities and with problems that they may be experiencing during out-of-school times.

b. Regular reports and conferences. Parents of students in regular education are accustomed to receiving report cards at periodic intervals; parents of some special education students rarely receive reports and may be invited to participate in conferences only once a year, when the Individualized Education Program (IEP) is written. School programs that achieve active parent involvement are nearly always characterized by emphasis on communicating with parents through regular reports and conferences.

c. Inclusion of parents in policymaking and evaluation activities. In order for real parent-professional collaboration to occur, special education programs must recognize parents as persons with valuable ideas to contribute. Including parents in policymaking and evaluation activities implies that school personnel respect parents' views and are willing to accept parents' suggestions for program improvement.

Administrators in the Hamilton County School System recently completed a parent survey. They asked 300 randomly selected parents of special education students to respond to questions about how satisfied they were with school services provided their children and what suggestions they had for program improvement. This effort represents a rather rare attempt by special education professionals in Tennessee to actively solicit parent participation in policymaking and evaluation activities. More such efforts would be instrumental in building parent support and trust.

Essential Function 4

Tennessee special education programs should encourage the building of an effective cadre of professionals and paraprofessionals who can meet the educational needs of students with special learning problems.

Without skilled teachers and trained paraprofessionals, special education programs have little chance of achieving success. The following indicators are generally associated with effective personnel programs.

a. Proper endorsement of personnel. One indicator of effectiveness in personnel is proper endorsement. Lack of properly endorsed personnel was a major problem when Chapter 839 and Public Law 94-142 went into effect. The problem was further complicated when new mandatory special education endorsement requirements were adopted in Tennessee in the late 1970s to replace those that had been in use since 1962.

The Comptroller of the Treasury reported that as of May 1978, new special education teacher training programs had been approved by the State Board of Education in four state-supported universities and one private college: East Tennessee State University, Tennessee Technological University, the University of Tennessee at Chattanooga, Middle Tennessee State University, and Milligan College. The new special education teacher training program was not in effect at that time at the University of Tennessee, Knoxville, the University of Tennessee at Martin, Austin Peay State University, or Tennessee State University (Comptroller, 1979).

Local school systems' efforts to employ properly endorsed personnel with appropriate credentials for working in their speciality area are critical if quality is to be achieved in Tennessee special education programs.

b. Availability of consultation for personnel. Special education teachers and other personnel need an effective support system in order to provide the most beneficial instructional programs for their students. An indicator of effective personnel programs frequently cited in the teacher training literature is the availability of meaningful consultation--that is, ongoing opportunities to discuss with other professionals special problems and difficulties and to collaborate on solutions to those problems and difficulties. The availability of regular consultation seems to be a most important factor in developing and retaining effective special education staff persons.

c. Built-in systematic evaluation of personnel. Special education professionals and paraprofessionals should expect that regular evaluation will be a part of their yearly activities. Ongoing and cyclical evaluation is an important "check" for school systems and for personnel alike who are concerned about excellence in providing educational programs to students with special learning problems.

d. Incentives for professional activities. Another indicator of effective personnel programs is the emphasis schools place on encouraging professional activities. Providing incentives for professional activities, including rewarding outstanding achievements, is an important indicator of effective personnel programs.

e. Appropriate inservice activities. The term "inservice" is a rather broad concept that can be applied to a number of different activities. The key to relevant inservice activities, according to Shaw and Shaw, is a focus on specific classroom problems (1972). In the 1980-81 school year, Tennessee inservice education programs included topics such as programming for severely/profoundly handicapped children, the role of the principal in implementing programs for handicapped children, parent involvement, and child find. Teachers and school districts have been encouraged to suggest topics of interest for potential inservice experiences.

In 1981 the Division for Education of the Handicapped conducted a survey to determine inservice training needs of educators of handicapped students. Those topics rated most desirable by respondents included appropriate methods and materials (54.8 percent), classroom management techniques (47.9 percent), testing requirements (37.2 percent), and implications of the state minimum competency program (40.9 percent).

Inservice training activities that include regular and special educators interested in a common topic seem especially worthwhile. East Tennessee State University in Johnson City has sponsored a special inservice program entitled "Sharing Educational Concepts: Linking Vocational and Special Education."

Such focused and well-developed training programs are critical for effecting quality in Tennessee special education programs.

Essential Function 5

Tennessee special education programs should work in close conjunction with regular education programs and should include a range of placement options for those students whose needs require more specialized attention than regular teachers can provide in full-time regular classrooms.

If school services are to proceed in a smooth and truly need-responsive fashion, then an important goal for the future is a more blended system of special and regular education programs. Such a system involves "letting go" of the notion that special education and regular education are two separate service delivery systems, with different technologies and different missions. Effecting a renegotiation between the two systems offers the promise that "in the decade ahead, special education could become general education and general education, special" (Corrigan & Howey, 1980, 200).

Listed below are indicators of an effectively blended system of special and regular education programs.

a. Careful, long-range, need-based planning. A school system that fails to prepare adequate numbers and kinds of special education programs for its students is often characterized by parent and teacher discontent and by long waiting lists for service. Children who remain in regular education programs as an "underserved" population account for many of the learning and behavior problems with which school officials must deal.

In October 1981, 7,577 children in Tennessee were referred but not evaluated for special education; 1,998 were certified as handicapped but not verified for service. These children usually remain in the regular classroom until action is taken on their referral. In a more blended system of regular and special education, individual children would be seen as the responsibility of the entire school and not as the responsibility of one subset of the school or the other.

One area in which planning is critical is that of identifying children's needs for service before they enter the school system. By law the Tennessee Department of Education is supposed to conduct "Child Find" each year, resulting in census information on children 0-21 who have handicapping conditions. In practice, "Child Find" is an extremely difficult task. Confidentiality rules, parents' lack of awareness of school policies, physicians' reluctance to conclude that a very young child is in fact handicapped--these and a number of other factors make compiling accurate census information on preschool and out-of-school children a nearly impossible undertaking.

Nevertheless, some special education directors actively encourage parents and community workers to inform them of infants and young children who will need special education services when they reach school age. Ruthelma Warf in Dickson has participated in such efforts, indicating her concern that when these children enter school there will be appropriate classes for them. Several Dickson special education teachers assist parents of preschool children in planning home programs.

b. Development of incremental plans so that students can move into and out of special education as needed, rather than getting stuck in a special education "track."

Some children need special education services for only brief periods of time during their school careers. Some children need only minimal levels of special education support during their entire school careers. Categorizing such students as "special education" students may be inappropriate for much of the time they spend in school.

Because psychological evaluations and subsequent placement in special education are required only once every three years, some children may spend an unnecessary length of time in special programs. Because classroom assignments are usually made on a yearly basis, children who need only a few months in special placements may either be denied such help or may be given extra help for a longer period of time than is necessary.

Under current special education law, school systems are required to maintain a variety of options for service, ranging from the regular classroom program with additional supportive services (Option 1) to home and hospital instruction (Option 10). Placements are to be made on the basis of educational need rather than handicapping condition (i.e., all children with a particular handicapping condition are not to be automatically placed in the same option). Developing appropriate incremental plans that focus on children's needs rather than children's handicaps has been a difficult problem for some school systems. Iris Chapman, special education director in the Hamilton County Schools, has developed an increased number of options that are being used to remedy this problem in her area.

c. Appropriate referral procedures in place. Technically, children are to be referred for special education when a particular learning problem is suspected. According to the special education literature, once children are referred they seem to move inexorably on into the special education system, perhaps to remain there for the rest of their school careers. Some educators have suggested that a more effective system of "checks and balances" needs to be instituted so that regular education teachers are supported in keeping children with mild problems in their classes.

Essential Function 6

Tennessee special education programs should encourage the active participation of the community in services for students with handicapping conditions.

Without community involvement in special education programs, the ultimate success of these programs is questionable. Involvement should include mutual give-and-take; that is, individuals and community groups can offer support to special education programs, and special education students and classes can contribute to community activities.

Two important indicators of active community involvement in special education programs are listed below.

a. Development of ties with community agencies and organizations. In several parts of Tennessee, special educators have worked diligently with representatives of other community agencies to build comprehensive special education programs. A particularly striking example is the residential program for students with autism offered by the Memphis City Schools. One of a handful of school-operated residential programs in the United States, the Raineswood program represents a collaborative community effort to meet the needs of a very special group of children.

The Raineswood program is staffed by school personnel but housed in a facility belonging to the Episcopal Church Home, a Memphis charity group. Raineswood students go swimming at the YMCA and participate in weekly adaptive physical education experiences at Memphis State University. They receive dental care from the University of Tennessee School of Dentistry. Each agency participating in the Raineswood program receives regular recognition for its efforts. Members of the Episcopal Church Home, in fact, have recently expressed interest in organizing an adult group home for graduates of the Raineswood school program.

In Chattanooga, a homemaker Mary Ann Schenk has organized a "Kids on the Block" puppet show with a $3000 grant from the Lyndhurst Foundation. This puppet show consists of puppets with various handicaps who, in a lighthearted manner, "talk" to school children and answer questions they have about certain handicaps. Persons who have seen the show have noted its effectiveness in helping nonhandicapped children understand and relate more positively to their peers who happen to have disabling conditions.

Beginning this year, the Harris-Hillman school serving multiple handicapped students in Nashville will have a part-time nurse on staff. The salary of the nurse is being paid through contributions from two private citizens, since public agencies had refused to include such funds in their budgets.

Clearly, community agencies and private citizens are important resources for special education programs. Innovative approaches for tapping these resources are critical to the success of Tennessee special education programs, as well as to the sense of community participation in these programs.

b. *Encouragement of special education activities that benefit the community*. A number of Tennessee special education programs, especially those for adolescents, have begun activities that provide service to the local communities. Students at the Lester Sheltered Skills Center in Memphis are taught how to participate in paid contract work (sorting small bars of soap by color, cleaning the football stadium after a game, stuffing envelopes, etc.)

They earn small salaries for their work and learn how to manage paychecks and checking accounts, as well as to work in a sheltered workshop setting.

Students in the Vocational Advancement Program at the Heritage High School in Blount County recently completed an important project in their community. In the process of learning how to perform basic plumbing skills, the students actually ran water lines for the school. These and similar activities illustrate the many beneficial ways in which special education programs can serve the communities in which they are located.

Current Efforts of the Division for Education of the Handicapped to Improve Quality in Special Education Programs

In the past year the Division for Education of the Handicapped in the Tennessee Department of Education has begun a number of efforts to improve quality in Tennessee special education programs. A few of these efforts are highlighted below.

1. Interdepartmental and interagency agreements. The Division has initiated a number of activities aimed at better coordination with other state agencies involved in delivering educational services to students with handicapping conditions. Most of the interdepartmental and interagency efforts undertaken to date have involved the Tennessee Department of Mental Health/Mental Retardation and the Divisions of Vocational Rehabilitation and Vocational Technical Education within the Tennessee Department of Education, although other efforts will be initiated in future months.

2. Financing. During the fall of 1981, a special Committee on Financing Special Education in Tennessee met and developed recommendations at the

request of Wandy Moody, Assistant Commissioner, Division for Education of the Handicapped. Headed by Z. H. Brody, Director of Special Education for the Anderson County School System, the Committee suggested a number of changes in current methods of financing and accounting for funds allocated to special education programs. Chief among these recommendations was the replacement of the single "add-on" factor established by the Tennessee Education Finance Act of 1977; the Committee suggested that funding indices for options of services provided be used instead.

The Committee also recommended establishing minimum standards for special education programs and services. Such standards would include maximum caseloads and minimum student contact schedules for each program option. Other recommendations included obtaining more valid data on incidences of various handicapping conditions, together with geographic distributions of students having these conditions; improving screening and assessment mechanisms for locating and serving children not in school or children served in other types of situations; developing interagency and interdepartmental agreements as necessary; and examining the potential of area education and treatment centers or consortiums for high cost/low incidence children.

3. Monitoring. All school systems in Tennessee are currently involved in special education monitoring activities on a three-year cycle. Rather than sanctioning districts not in compliance with state and federal special education laws, the monitors have emphasized providing technical assistance and other supports to encourage school systems to improve the quality of their services.

4. Student Evaluation Manual. The Division for Education of the Handicapped is currently working on a Comprehensive Student Evaluation Manual to assist local school systems, state operated programs, and private facilities

to provide appropriate educational opportunities for students with handicapping conditions. Included in the Manual will be information on child find, screening, referral, the Multidisciplinary Team approach, assessment, the Individualized Education Program (IEP), various programs and services, reevaluation, record keeping, and confidentiality.

5. Inservice experiences. Teachers, administrators, and other program personnel have been asked to suggest their own ideas for inservice training activities. A detailed survey was recently completed by the Division and will be used as a basis for decisions about future training offerings.

Suggested Areas for More Investigation

Although significant efforts are being made at both the state and local levels to improve the quality of Tennessee special education programs, there are clearly a number of major problem areas remaining. Listed below are some of the subjects needing more investigation if Tennessee is to offer a truly comprehensive and smoothly coordinated system of educational services to students with handicapping conditions.

1. Effective coordination of educational programs. According to the Comptroller of the Treasury, services for students with handicaps in Tennessee are offered in 13 state departments under 60 different budget codes (Comptroller, 1979). Within the Tennessee Department of Education, various programs are administered by various Divisions, and the four state special schools (Tennessee School for the Deaf, Tennessee School for the Blind, Tennessee Preparatory School, and Alvin C. York Agricultural Institute) are administered separately. In order for programs to be managed as efficiently and as cost effectively as possible, a more centralized and streamlined system

of administration seems to be indicated. The possibility of organizing under the umbrella of the Division for Education of the Handicapped all educational programs for students with handicapping conditions should be investigated.

2. Effective coordination of educational and noneducational programs. Many students with handicapping conditions have needs that are not strictly educational in nature. Some may need residential services, some may need various specialized therapies, and some may need certain kinds of medical supports. Most students with severe handicapping conditions will need to move into adult programs when they complete their school years. Regardless of which agency is responsible for meeting which needs, ways of more efficiently coordinating educational and noneducational services must be sought if Tennessee special education programs are to have maximum impact on the community and produce maximum benefits for students involved.

3. Funding. The Committee on Financing Special Education in Tennessee has made an important beginning in examining current financing mechanisms and in recommending improvements. Particular attention should be paid to how funds appropriated for special education are actually spent. Advocates point out that some local school districts have interpreted current Tennessee law to mean that 15 percent of their special education money may be diverted to regular education. The fact that no funds are appropriated for new buildings and/or renovations should be studied. These and other important issues must be resolved before Tennesseans can be sure that special education programs are adequately and efficiently funded.

4. Parent and community involvement. An area needing administrative attention is that of finding ways to involve parents and interested members of the community in more policymaking and evaluation activities. Clearly, parents and community members have much to contribute to the success of

Tennessee special education programs, and administrators who can find ways of building in important roles for these persons are likely to be rewarded by enthusiastic community support for their programs.

5. Inservice training models. Another area for administrative attention is development of more effective inservice training models. The workshop or lecture is a familiar model; less frequently used models that may also be helpful include small group activities and ongoing consultation. Personnel preparation institutions in Tennessee have much to offer in structuring effective models; expansion of such efforts should be carefully considered.

6. Program evaluation. Clearly, much work needs to be done in evaluating the long-range effectiveness of various programs and teaching methods. Although knowledge about how to assess program impact on the learning of students with handicapping conditions is currently somewhat limited, Tennessee policymakers need data on program outcomes and results in order to evaluate which programs are most effective and which should be selected for possible replication.

7. Quality concerns. Finally, administrators need to seek ways to move from compliance issues to quality issues. Development of minimum standards is a first step in this direction; incentives that could be offered for quality programs and quality performance by program personnel would be another step. The emphasis to date on simple compliance with state and federal law has been essential for school systems gearing up to meet the challenges of a new school population. However, the time now seems ripe for examining and supporting quality in Tennessee special education programs.

V. FINANCING THE PUBLIC SCHOOLS IN TENNESSEE*

Introduction

Tennessee's comprehensive education system, kindergarten through the universities, is one of the remarkable achievements of the twentieth century. No accomplishment of the people of Tennessee is more important in enabling her citizens to take their proper place in participating in the unprecedented scientific, technological, economic, and social changes of our times. A basic assumption underlying this review is that in the long run the priorities given to quality education will determine in large measure the future of the economy and of democracy itself. Through education citizens continuously renew and extend their knowledge, develop their skills, reappraise their ideas, and develop new perspectives that enable them to survive and flourish. The public schools play a key role in providing each year the basic foundation in the education of more than 800,000 of Tennessee's children and youth. This fact and the massive amount of resources (more than $1.4 billion annually--state and local) invested in the public schools underscore the importance of having wise policies and effective planning for adequately financing and efficiently operating these schools.

The purpose of this review is to seek the best possible understanding of the status of financing the public schools of Tennessee, of the problems confronting the state in financing these schools, and of the choices that should be considered in planning to meet their needs in the future. It draws upon data from the Tennessee Code Annotated, various state and federal agencies, and updates aspects of The Tennessee School Finance Equity Study conducted during 1978-79.

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*This review was performed by Dr. James E. Gibbs, ret., U.S. Office of Education, for the Tennessee Comprehensive Education Study.

State Financing of the Public Schools

That the state is responsible for and is required to provide for the support of the public schools is firmly established in the Tennessee Constitution. Article XI, Section 12 of the Constitution states:

> The General Assembly shall provide for the maintenance, support and eligibility standards of a system of free public schools.

Delegating to the counties, and in some cases to cities and special school districts, a share of the responsibility for financing and operating the public schools keeps the education of children close to the people. But this does not relieve the General Assembly of the responsibility for seeing that financial resources are available in the local school districts to support the public schools adequately and equitably, and for seeing that the schools are organized and operated efficiently.

The courts have held that public education is primarily a state function [Board of Education v. Shelby County, 207 Tenn. 330, 339 S.W. 2d 569 (1960)]. The courts have held also that county taxes

> . . . at last, are but state funds, provided by the state through the power delegated to the counties . . . . that essentially and intrinsically the schools, in which one educated and trained children who are to become rulers of the commonwealth, are matters of state, and not local, jurisdiction; that in such matters the state is a unit, and the legislature the source of power; that the establishment and control of public schools is a function of the general assembly, both under the constitution and because it is a matter of state concern [Leeper v. State, 103 Tenn. 500, 53 S.W. 962 (1899)].

Formulas States Use in Financing Public Schools

There is wide diversity among the states in the methods used in financing public schools. Types of formulas used are outlined below:

1. Foundation Program--The state determines the educational program(s) needed to provide the educational opportunities which it wishes to assure in the public schools for all children. It then determines the financial resources required to provide these educational opportunities. Educational needs factors in the Foundation Program (adjusting for differences in the per pupil costs for various grade level programs or for meeting the special needs of certain student populations as education of the handicapped, or vocational education) are usually measured in one of these ways:

   A. salary schedules, pupil-teacher ratios, teacher-teacher ratios, and categorical allotments for transportation, maintenance and operation, etc.

   B. classroom units, based on pupil-teacher ratios, teacher-teacher ratios, average costs for operation, and the like

   C. weighted pupils, determining the cost per pupil of the desired educational program(s) in a selected grade (or other instructional program level) and relating the costs of all other grades or instructional programs to the cost of the base level program.

   States finance the foundation program either by fully funding it from state tax revenues or by providing from state funds the remainder of the cost after each local school district has made a uniform local tax effort by some measure of relative taxpaying ability. The educational needs factors, mentioned above, equalize among school districts for differences in the per pupil costs of providing the various grade level, or other instructional programs. The required local effort factor in the foundation program is a way of equalizing for differences among these districts in taxable wealth per pupil (see Table C-7 in Appendix C).

2. Guaranteed Tax Base (Power Equalization)--Provides guaranteed yield of similar revenues per pupil for similar effort. The guaranteed tax base equalizes among local school districts for differences in taxable wealth per pupil. Generally, it does not equalize for differences in the per pupil costs for pupils in the various grades, or for variations in the costs of instructional programs for special student populations. It could do so *if* the pupils were weighted to adjust for differences in costs of grade level or subject area programs and *if* the level of support assures in all school districts the full necessary costs of all basic programs in the public schools.
3. Two-tiered Programs--Combinations of Foundation Program and Guaranteed Tax Base.
4. Full State Funding--Hawaii is the only state in the United States that fully funds the public school system and operates it from the state level.

The uniform local tax effort provisions incorporated in foundation programs and the guaranteed tax base used by some states are procedures for accomplishing the same end. Each of them is a way to offset with state funds in districts with lower taxable wealth per pupil the lower productivity of a given level of local tax effort. Either of these methods can be used satisfactorily to adjust for disparities in the financial resources available for the education of children that are due to disparities in local taxable wealth. The degree or extent of equalization achieved by either will depend upon the proportion of local public school revenues equalized. The higher the proportion of the local taxes for public schools included in either process, the higher the degree of equalization. Generally, the higher the proportion of state funding, the higher the level of equalization.

Formulas are procedures, useful and necessary, in implementing state policy in financing the schools. Of themselves they do not solve the problems of adequacy. They can be used to deliver financial resources to the point of educational need, to measure educational need and cost, and to measure local ability to provide a share of the necessary resources. In the end, adequacy and equity in financing educational opportunities depend upon having ample tax resources equitably and efficiently used and derived from a tax base that is equitable and efficient in providing the needed revenues.

The Tennessee Program for Financing Public Schools

Tennessee has a foundation program and uses the weighted pupil method in measuring educational need. Tennessee includes in its foundation program, also, a local required tax effort (see Table C-7 in Appendix C). This equalized local effort, however, represents only a small part (less than 10 percent) of the total local tax effort for the Tennessee public schools.

In addition to the required local effort in the foundation program, Tennessee requires each local school district to pay from local funds not less than $1,145 as a salary supplement to each certified teacher with a degree. This requirement places an unequal burden upon local school districts because of the wide variations that exist among them in taxable wealth per child.

An accurate measure of local (county) taxpaying ability is necessary to determine a fair and uniform local share of the foundation program. Tennessee uses assessed valuation of taxable property, adjusted by property equivalents for TVA payments in lieu of taxes. Property is not uniformly assessed. State Board of Equalization ratios show wide variations in the ratios of assessed value to estimated value, ranging from 20 percent in Hancock County to 100 percent in twenty counties.

Tennessee, like many other states, provides categorical grants for specific purposes such as pupil transportation, textbooks, and school food services. State categorical funds may be provided inside or outside the foundation program. Tennessee provides them outside. In some states expenditures for the public schools such as state allocations for personnel retirement accumulation funds, teacher social security contributions, and aged teacher pensions are handled at the state level rather than including them in the foundation program or otherwise distributing them to local school districts. This is done in Tennessee.

A summary of the state-local program for financing for the public schools in Tennessee is presented in Chart 1. Similar summaries for Florida, South Carolina, and Kentucky are in Appendix C in Charts C-1, C-2, and C-3, respectively.

Like Tennessee, Florida and South Carolina have foundation programs, the weighted pupil approach, and a required local tax effort. There are important differences. Florida and South Carolina include in the foundation program most of the cost of basic education programs in the public schools; Tennessee does not. Florida and South Carolina equalize a much larger proportion of the total local tax effort for schools than Tennessee. Also, they provide from the state tax base a significantly larger percentage of the total federal,

CHART 1

Financing Public Schools, K-12 In Tennessee, 1982-83

Basic State Support

FOUNDATION PROGRAM (TFP)
$439 per weighted pupil FTEADA, adjusted by a district differential for training and experience of certified personnel employed on December 1 of the current school year.
This adjustment ranged in 1981-82 from 1.070 to 1.285.
Required local effort. County index of ability (based on assessed valuation of property adjusted by TVA payments) times $52,067,372. In addition, each local school system must pay from local funds a salary supplement of not less than $1,145 per school year to each certified teacher with a degree.
Estimated ADA 808,000.
Foundation Program Cost - $592,105,972.
TFP average amount per FTEADA pupil $732.80.
State Share of TFP - $540,038,600.
Average amount per FTEADA pupil $668.36.

STATE CATEGORICAL FUNDS
Textbooks. $10 per pupil ADA the preceding year, plus $15 per pupil increase over preceding year, total $8,161,500.
Pupil Transportation, a total of $18,498,000 allocated 60% on basis of pupils transported and 40% in proportion to geographic area.
Leave for Teachers, a total of $4,161,500 for one-half of salaries up to $26.00 per day ($13.00 per day state funds.) paid to substitute teachers.
Vocational Education, an amount of $2,640,000 to supplement special programs for the disabled and handicapped, on a special grant basis and to supplement pupil transportation and overhead cost for vocation centers.
Driver Education, a total of $822,000.
School Food Services, $4,633,100 matching funds for participation in national school lunch program.
Capital Outlay. $11,856,500 allocated upon a per pupil ADA basis and in inverse proportion to locally assessed wealth adjusted by TVA payments. State capital outlay funds may be used for school building and equipment including school transportation equipment and school bond debt service, and not to exceed 15 percent for contract operation of school buses.
Retirement Accumulation Fund - $124,533,600.*
Teacher Social Security Contributions - $47,718,400.*
Aged Teachers' Pensions - $2,667,200.*

TOTAL STATE FUNDS - $765,730,400.
Average amount per FTEADA pupil - $947.69.
ESTIMATED TOTAL LOCAL REVENUES - $675,000,000.
Estimated Local revenues per FTEADA - $835.00.
GRADE TOTAL STATE AND LOCAL FUNDS - $1,440,730,400.
Average amount of state and local funds per pupil FTEADA - $1,783.

*Paid directly by state - not distributed to local school districts.

Prepared by James E. Gibbs with the assistance of the Tennessee Department of Education Fiscal Services staff.

Grade Level Adjustments

Grade	Weight
K-3	1.245
4	1.10
5-6	1.00
7-8	1.10
9	1.20
10-12	1.30

Educational Program Adjustments

Exceptional Education:
All identified and served handicapped pupils receive a weighting of 1.00 in the Tennessee foundation program, in addition to grade level and program weightings.

Vocational Education:

	Weight (1)
Agriculture (10 mo)	1.8312
Agriculture (12 mo)	2.0005
Voc. Home Economics	1.764
Health Occupations	1.764
Trade & Industries	2.0832
Related Trade & Industries	1.5456
Office Occupation	1.7136
Distributive Education	1.7136

(1) Net after 16 percent reduction factor applied in 1982-83.

(See State Categorical Funds)

Revenue by Source 1980-81

Amount 1980-81	
Federal	$191,122,167
State	$706,383,188**
Local	$597,396,054

Percent	
Federal	12.8
State	47.2
Local	40.0

**Includes state contribution to the teacher retirement accumulation fund ($110,352,000), state matching payments to social security ($39,970,477), and payments for aged teachers ($2,707,103).

state, and local tax revenues than Tennessee. In addition to the foundation program, Florida has a second tier guaranteed tax base.

Kentucky uses a classroom unit basis for measuring educational need and cost in the foundation program. It, also, includes in the foundation program most of the cost of the basic education programs in the public schools; equalizes through a second tier guaranteed tax base a significant share of the local tax outside the foundation program; and provides from the state tax base a much higher percentage of total federal, state, and local revenues for public schools than Tennessee.

Base amounts included in 1982-83 in the foundation programs of the four states are summarized below:

Tennessee	$439.00 per weighted FTEADA pupil adjusted by a district differential for training and experience of degree teachers ranging from 1.07 to 1.285 with a state average of 1.21.
Florida	$1,397.337 per weighted FTE pupil adjusted by a district differential cost of living index ranging from .9511 to 1.07.
South Carolina	$1,046.00 per weighted pupil ADM.
Kentucky	An average of $17,805.08 per classroom unit for instructional salaries, $3,750 per classroom unit for current expenses, and $1,800 per classroom unit for capital outlay. Classroom units are allocated for eight program categories under teacher-pupil ratios established by the state.

Percentages of total revenue for public schools (federal, state, and local) provided by each state are:

	Federal	State	Local
Tennessee	12.8	47.2	40.0
Florida	10.3	55.4	34.3
South Carolina	14	54	32
Kentucky	14.3	65.3	20.4

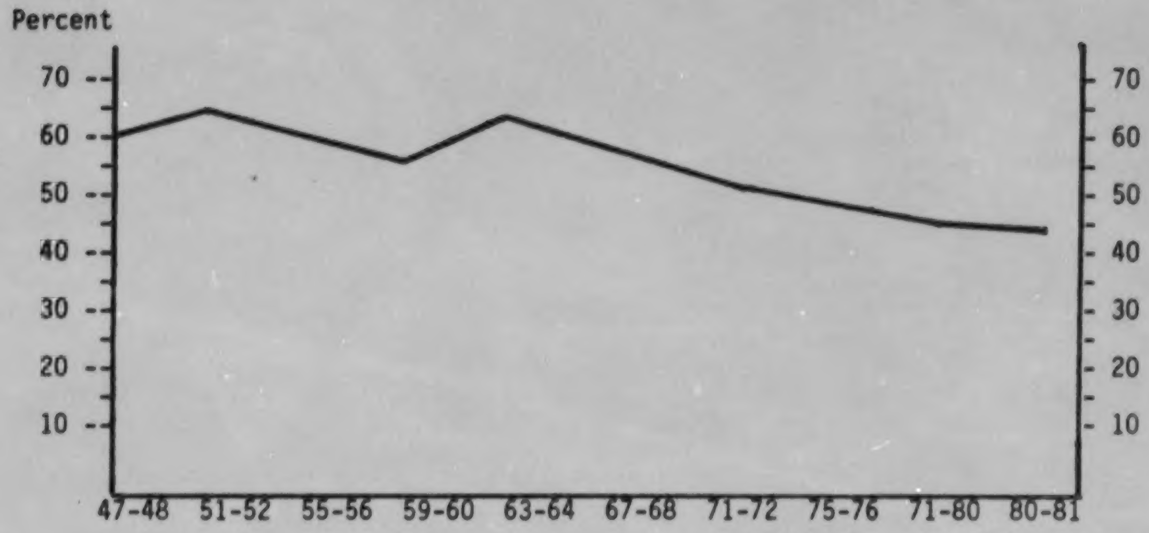
Percentages of foundation program costs provided from local tax effort are: Tennessee 8.8, Florida 29.6, South Carolina 30.0, and Kentucky none.

Trends in Financing Public Schools in Tennessee

In 1947-48, when the 2 percent sales tax was enacted, the state share of revenues available in local school districts for public schools was 57 percent of the total, and the local share was 43 percent. In 1980-81, the state portion was 48.1 percent and the local, 51.9 percent (see Figure 1).

Figure 1

State Funds as a Percentage of all State-Local Receipts in Local School Distribution: 1947-48 through 1980-81



Total state-local school district revenues for K-12 in 1947-48 were approximately $78 million and in 1980-81, they were more than $1 billion. Both state funds and local funds increased rapidly during this period, but local funds increased more rapidly than state funds. During this period, local district public school revenues derived from state funds increased from $44,575,664 in 1947-48 to $553,353,609 in 1980-81, and local funds increased from $33,621,654 in 1947-48 to $597,396,054 in 1980-81. Thus, over this period, local district revenues received from the state increased 12.4 times while revenues from local tax sources increased 17.8 times (see Table C-8 in Appendix C). A great deal of this increase was caused by inflation. The average U. S. Consumer Price Index rose from 58 in 1946 to 272 in 1981.

In 1955-56, the state sales tax was raised to 3 percent; in 1971, to 3.5 percent; and in 1976, to 4.5 percent. In 1963, the local option retail sales tax was authorized at one-third the state rate with $5.00 per article maximum, and was increased in 1968 to one-half the state rate with $7.50 per article maximum. By 1981, the local option sales tax provided approximately one-third of all local revenues for schools.

The state tax base used by Tennessee to support public schools (primarily sales taxes) is regressive (leans heavily on the poor) and has proven not to be productive enough to meet the rising costs of education. Also, sharing the sales tax base with local governments has severely limited the state in its potential for obtaining from the state tax base the additional tax resources needed to meet rising costs. Consequently, the state has been prevented from maintaining its percentage of the funds spent on the public schools, and the local share of the cost of the public schools has been forced upward. Meanwhile, there are wide disparities in the capacity of the local school districts to raise the needed revenues (see Tables C-9 and C-10 in Appendix C). Under these circumstances, the money spent for public education programs is heavily dependent upon the widely varying amounts of local taxable wealth (property and sales tax) per pupil rather than upon educational need. Having inadequate resources at the state level and relying heavily on the local tax base leave children over the state with unequal and many with inadequate opportunities. While the local option sales tax might have prevented a property tax revolt in the state, it has increased the disparities among local school districts in funds available for education.

Tables C-11 through C-17 provided in Appendix C demonstrate trends in expenditures for the direct costs of regular instruction, of vocational instruction, the additional cost above regular instruction for the education of the handicapped, for the operation and maintenance of school plant, for pupil transportation, and for capital outlay. A definite trend is observable in the decreased proportion of state support for operation and maintenance, pupil transportation, and school plant and equipment capital outlay funds. The exception is the amount of state bond funds allocated for construction of vocational facilities.

During the period 1977-78 through 1980-81, the average direct cost of regular instruction increased from the $612 per pupil in 1977-78 to $789 per pupil in 1980-81. The average cost of vocational instruction per pupil FTEADA increased from $1,367 in 1977-78 to $1,605 in 1980-81. The additional costs, above the cost of regular instruction, for identified and served handicapped (I&S) pupils increased from $509 per I&S pupil in 1977-78 to $828 per pupil in 1980-81.

Expenditures for maintenance and operation increased from $129 per pupil in 1977-78 to $184 per pupil in 1980-81 (a 42.6 percent increase), with no increase in state funds. The costs for pupil transportation increased from $80 per pupil transported in 1977-78 to $113 per pupil transported in 1980-81 (an increase of 41.3 percent), while the state transportation allotment increased 18.8 percent.

In concluding this brief review of overall trends in financing public schools in Tennessee, it is important to note that while expenditures for the public schools have increased rapidly, most of these increases have been caused by rising costs due to inflation of all the resources needed and used in educating children. The current slowing down and depression in the economy, hopefully temporary, and the current reduction in the rate of inflation may change the rate of increase in costs. However, the decrease in the rate of growth in tax revenues may be even greater. The problems of adequacy and equity in the state program for financing the public schools will remain until the General Assembly is in a position to make fundamental changes in the state tax base and in the resources provided in the foundation program. This, in turn, is conditioned by attitudes about taxation that developed over the long period of time when poverty was the rule rather than the affluence of today. The situation is complicated also by changes in the composition of the population--the aging of the population and the increasing proportion without children of school age.

Significant additional data regarding the Tennessee economy, population analyses, kindergarten through grade 12 enrollment projections, and school finance trends were developed for the Tennessee Comprehensive Education Study. These data may be found in Chapter II of the entire Study and are not repeated in this section.

Profiles of Financing Tennessee Public Schools

State and local support, supplemented by federal assistance, constitute Tennessee's present program for financing the public schools. In the accompanying Chart 2, revenues per adjusted weighted pupil for 1980-81 are shown for local education agencies ranked in groups in terms of combined state and local revenues (see Table C-18 in Appendix C). In Chart 3, the public school revenues (state and local combined) for 1980-81 and the federal assistance for that year are shown on the basis of amounts per pupil in average daily attendance rather than by weighted pupils (see Table C-19 in Appendix C). The combined state and local revenues per weighted pupil (adjusted) in fifteen local education agencies (LEAs) with 4.62 percent of the weighted pupils in the state averaged $582 per weighted pupil. The ten LEAs

SUPPORT FOR PUBLIC SCHOOLS, K-12

Revenues for public schools come from local, state and Federal sources. Amounts per weighted pupil (adjusted by factor for training and experience of teachers - (T & E)), for local districts are shown on this chart.

Grouped by rank for combined state and local funds. Most disparities in revenues per adjusted WFTEADA result from local funding outside the Tennessee Foundation Program. (TFP)

A = State share of TFP
B = Local share of TFP
C = State Guarantee (T.C.A. 49-607)
D = State Categorical Funds
(transportation, textbooks, leave for teachers, capital outlay, driver education & vocational education)
E = Local support outside TFP
F = Federal Funds

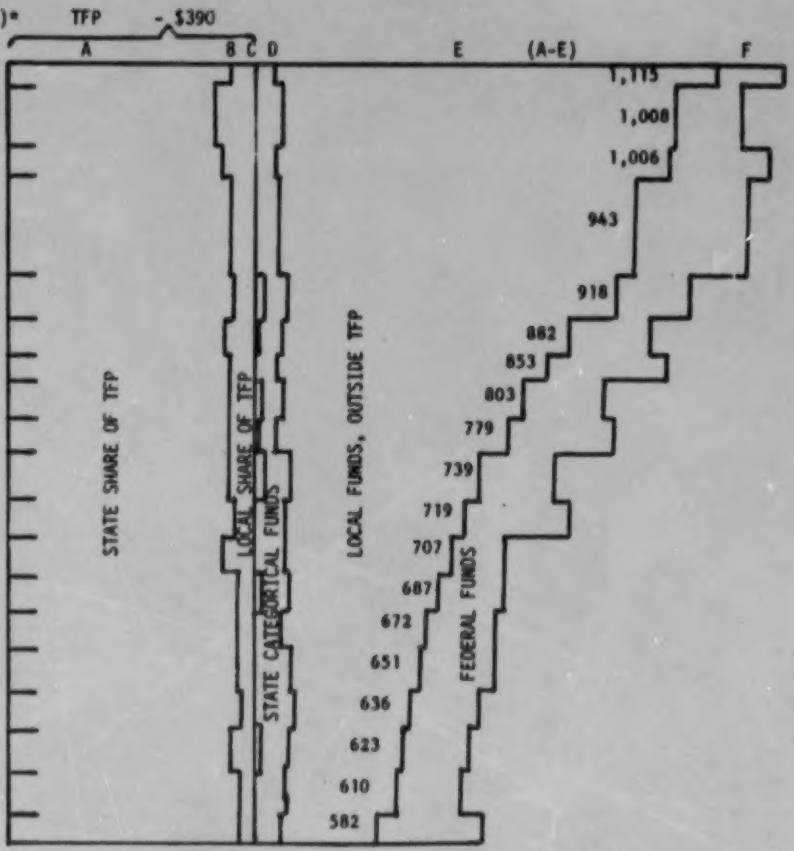
*Adjusted Weighted Pupils (WFTEADA + weighted identified & served handicapped) x T & E factor

Source: Tennessee Department of Education Financial Settlement Documents & Annual Statistical Report, 1980-81

CHART 2: PROFILE OF REVENUES PER WEIGHTED PUPIL (ADJUSTED)*

FOR PUBLIC SCHOOLS, TENNESSEE LOCAL SCHOOL DISTRICTS

1980-81



NUMBER OF DISTRICTS	PERCENT OF STATE WFTEADA (ADJUSTED)*	(A-E)	GRAND TOTAL
4	2.00	1,115	$ 1,232
1	8.56	1,008	1,103
1	3.37	1,006	1,206
1	13.05	943	1,135
5	6.53	918	1,048
3	5.55	882	977
6	4.28	853	1,001
5	1.66	803	902
7	3.87	779	916
12	6.16	739	856
7	3.15	719	884
8	5.84	707	815
14	6.04	687	809
10	4.33	672	808
14	8.11	651	796
11	4.24	636	773
13	4.31	623	769
10	4.59	610	758
15	4.62	582	796

SUPPORT TO PUBLIC SCHOOLS K-12

Revenues for public schools come from local, state and Federal sources. Amounts per pupil ADA for local districts grouped by rank according to combined state and local funds per adjusted WFTEADA are shown on this chart. Most of the disparities between high revenue per pupil ADA and low revenue per pupil are due to local funding outside the Tennessee Foundation Program (TFP).

A through E =:

State share of TFP
Local share of TFP
State categorical support
(For transportation, text-books, leave for teachers, capital outlay, driver education, and vocational education), plus local support outside TFP

F =:

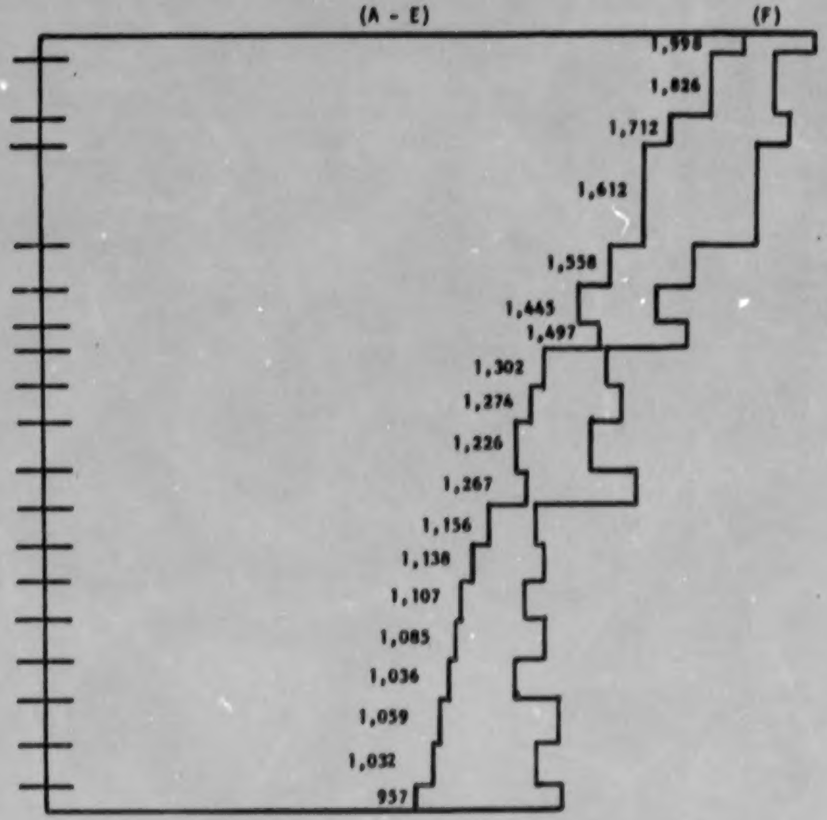
Federal funds

*ADA - Average Daily Attendance for best two of first three months of school year.

** - (WFTEADA + weighted identified & served handicapped) x T & E factor.

Source: Tennessee Department of Education Records & Annual Statistical Report 1980-81

CHART 3 : PROFILE OF REVENUES PER PUPIL (ADA)*
FOR PUBLIC SCHOOLS, TENNESSEE LOCAL SCHOOL DISTRICTS, 1980-81



NUMBER OF DISTRICTS	PERCENT OF STATE ADA	(A - E)	GRAND TOTAL
4	1.89	1,998	$ 2,206
1	7.98	1,826	1,999
1	3.10	1,712	2,053
1	12.90	1,612	1,940
5	6.00	1,558	1,779
3	5.70	1,445	1,601
6	4.12	1,497	1,767
5	1.73	1,302	1,462
7	3.99	1,274	1,499
12	6.28	1,226	1,421
7	3.02	1,267	1,556
8	6.02	1,156	1,333
14	6.16	1,138	1,341
10	4.44	1,107	1,331
14	8.23	1,085	1,325
11	4.40	1,036	1,258
13	4.28	1,059	1,308
10	4.58	1,032	1,283
15	4.71	957	1,318

(with 4.59 percent of all weighted pupils in the state) that ranked next lowest averaged $610 per weighted pupil in combined state and local revenues. At the upper end of the scale, four districts with 2 percent of the weighted pupils averaged $1,115 per weighted pupil in combined state and local revenues. The next highest district with 8.56 percent of the weighted pupils in the state had combined state-local revenues of $1,008 per weighted pupil. The next district had 3.37 percent of the weighted pupils and $1,006 per weighted pupil in combined state-local revenues; and the next highest district had 13.05 percent of the weighted pupils in the state with $943 per weighted pupil in combined state and local revenues. These wide disparities in combined state and local revenues per pupil, even after adjustments for differences in cost among grade levels and programs, cannot be justified.

As Chart 2 indicates, most of the disparities in state and local revenues occur in local funds outside the Tennessee Foundation Program (TFP). In the end, the state is responsible for this situation. The General Assembly has established the local tax base and has not equalized these local revenues with state funds, either by including in the foundation program the local effort now outside the TFP, or by guaranteeing that a given level of local tax effort would produce the same amount of revenue per weighted pupils (after adjusting for differences in the cost of educational programs). The relatively small proportion (less than 10 percent) of the revenues which the LEAs raise for public schools that is now included in the TFP helps a little. Without it, the disparities would be even greater. A factor which exacerbates the problems of disparities among school districts in taxable resources per pupil is the number of extremely small school districts in the state. Of the fifty-two city and special school districts in 1980-81, twenty-six had FTEADA of less than 1500 pupils. Thirteen of those districts had less than 800 pupils and nine districts had less than 500 pupils. Such small districts are not only relatively expensive to operate, they tend to weaken the county system in which they are located. Generally, they are not able to have personnel needed for sound business management or enriched programs.

The training and experience (T&E) factor is a school district differential allocating proportionately more funds to districts that employ teachers with more training and experience. It is defensible only if districts are equally able to employ well trained teachers. It varies from 1.07 (a 7 percent increase in money or weighted pupils) for the district with degreed teachers with the least training and experience to 1.285 (a 28.5 percent increase in money or weighted pupils) in the district with the highest training and experience. The district with the highest training and experience factor is also the district with the highest taxable wealth per pupil.

As indicated in both Charts 2 and 3, federal funds are significant in the state. They go heavily to deprived children in urban and rural areas where there is the greatest need. If federal funds are reduced drastically or discontinued, the state will need to consider making some adjustment in the TFP for compensatory education. Chart 4 provides for 1977-78 information parallel to that in Chart 2 for 1980-81.

Tables C-9 and C-10 in Appendix C, previously mentioned, provide information concerning disparities in taxable wealth per pupil among the Tennessee counties. Table C-9 shows the current value of taxable property in 1981 in each county, as estimated by the State Board of Equalization in their 1981 Tax Aggregate Report. This value was adjusted by a property equivalent value for payments made by TVA.

The Total Support Program

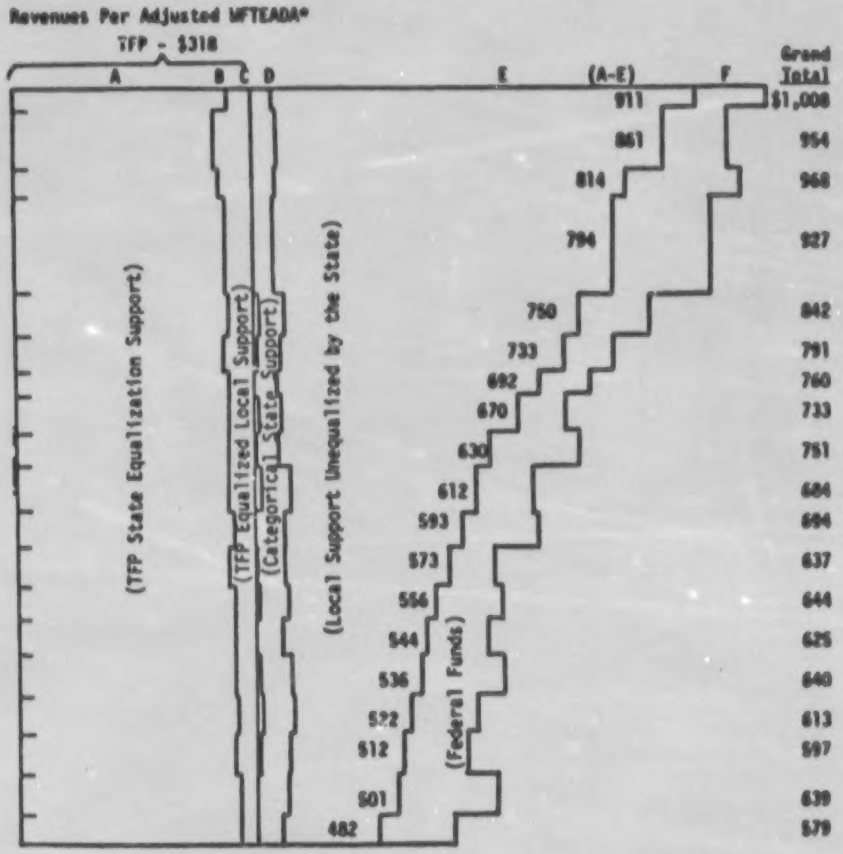
State and local support supplemented by federal assistance for specific purposes together constitute Tennessee's public school program. In the accompanying chart revenues from State, local and federal programs in 1977-78 are shown. LEA's are ranked in groups in terms of revenue from State and local sources per adjusted WFTEADA*. As this chart indicates most of the disparities in revenues per adjusted WFTEADA occurs in unequalized local funding outside the local share of the TFP.

A - State share of TFP
B - Local share of TFP (Equalized)
C - State Guarantee (T.C.A. 49-607)
D - State categorical support (includes: transportation, textbooks, leave for teachers, capital outlay, driver education, and vocational education)
E - Local support unequalized by the State
F - Federal funds

*(WFTEADA + weighted identified & served handicapped) x T and E factor

Number of Districts	Percent of State WFTEADA
4	2.1
1	8.9
1	3.3
1	13.3
5	4.9
3	5.0
6	2.9
5	4.5
7	5.2
12	5.7
7	4.5
8	5.3
14	4.5
10	5.0
14	5.0
11	5.0
13	5.8
10	4.7
16	4.4

CHART 4: PROFILE OF REVENUES FOR PUBLIC SCHOOLS, 1977-78



Source: State Equalization Plan for Financing the Public Schools in Tennessee, Tennessee School Finance Equity Study, October, 1979.

The amount of taxable property wealth ranges from $186,954 per pupil ADA in the county with most taxable property wealth per pupil to $54,912 in the county with least wealth per pupil. By this measure the county with most wealth per pupil derives from a given level of tax effort 3.4 times as much per pupil as the county with least taxable property wealth. Likewise, Table C-10 shows that one-half the 1980-81 state tax collections ranged from $1,209 per pupil ADA in the county with highest sales tax collections per pupil to $124 per pupil in the county with least sales tax collections per pupil. If this is taken as the measure of potential ability to raise taxes, then the county with the highest local option sales tax wealth per pupil has the potential to raise approximately six times as much per pupil from this tax base as the county with least local option sales tax collection capacity.

Relative Taxpaying Ability of Tennessee Counties

The amount of local effort which each county must contribute toward the cost of the foundation programs for the local school districts therein is determined by applying to $52,067,372 the percent that the county's assessed valuation of property (adjusted by a property equivalent for TVA payments in lieu of taxes based on the county tax rate) is of the total assessed valuation in the state. This measure is used also in the state capital outlay distribution. This measure would be equitable and appropriate (1) if property were assessed at a uniform ratio of assessment to value in all counties of the state; (2) if the property equivalent for TVA payments in lieu of taxes were measured by the average effective tax rate for all counties; and (3) if the tax base used by the counties (and LEAs therein) were composed almost entirely of property.

The State Board of Equalization has determined that the ratio of property assessment to estimated current value of property varies among the counties from 20 percent to 100 percent of current value. Ten counties have appraised their property at less than 40 percent of current value. Twenty additional counties are assessed between 40 percent and 50 percent of current property value. An additional twelve counties are assessed between 50 percent and 60 percent of current value. Under these circumstances, it is grossly unfair to counties that have assessed their property at or near current value to use assessed valuation as the measure. Also, using the county tax rate rather than the average effective tax rate in the state as the basis of calculating the property equivalent for TVA payments gives an advantage to the county with low assessment and higher than average county tax rate. Because one-third of the local revenue for public schools is derived from sales taxes, the property value index is not an accurate or adequate measure of this taxpaying ability. Furthermore, although the situation will gradually improve, there is no reason to assume that the school districts will achieve uniformity in the level of assessment in the near future. Accordingly, a new and better measure combining the taxpaying abilities based upon property TVA payments in lieu of taxes and the local option sales tax is needed.

Brown in his study, The Fiscal Capacity and Effort of Tennessee Counties to Support Programs of Public Education, 1978, suggested as one alternative combining measures of retail sales tax ability and adjusted property valuations corrected by sales ratio analyses. As part of this review, a measure was developed using essentially the same method except that taxpaying ability based upon TVA payments is measured directly rather than as an adjustment to current property valuations (see Table C-20 in Appendix C). Under this procedure, each county's percentage of the total state ability for each of the following three tax bases is determined: current property value, TVA payments in lieu of taxes, and sales taxes. The county's percentage of each of these three abilities is weighted in proportion to the share that the tax base provides of the total local taxes from the three combined. The result is the combined index of the county's taxpaying ability.

Conclusions

The most important problems confronting Tennessee in funding the public schools are questions of adequacy and equity. These problems arise primarily from the fact that in the foundation program the amount of funds per pupil in grades 5 and 6, and the weighted pupil amounts in most other grade levels or instructional area programs are far below the amounts necessary to provide basic educational opportunities in kindergarten through grade 12 (Cambron and Hale 1979, Yates 1980). To fully achieve its purpose, the TFP would need to cover the necessary costs of the basic educational program included in kindergarten through grade 12. The foundation program concept has been proven sound and workable--by Tennessee's experience with it since 1947 and by the experiences of most other states. The weighted pupil measure used in the TFP since 1977 is an appropriate procedure for measuring educational need if it is applied to the full necessary costs of educational programs, but this is not done in Tennessee. As used in the TFP at present, it is a procedure that does a good job of delivering to programs the available state funds.

The measure used to determine each county's share of the overall local effort included in the foundation program is not satisfactory. This measure is based primarily on property assessments. It is flawed because assessments vary widely in relation to true value. There are problems with this measure also in regard to the procedure for determining property equivalents for TVA payments in lieu of taxes and the fact that taxpaying ability derived from the local sales tax is not taken into account.

Closely related to inadequacies in TFP funding mentioned above is the significant decline in the proportion of the public school revenues available in local school districts that is derived from state funds. State funds have been increasing rapidly but the costs of the public schools have increased even more rapidly. The failure of state funding to keep pace with increasing costs has forced upon the tax base of the counties and of city and special school districts an increasing share of the burden of providing for the basic educational needs of children--not just enrichment. A major problem with shifting the burden to the local tax base is the fact that there are wide disparities among school districts in taxable resources supporting each child, leading to poorer education, particularly in the least wealthy districts. The decreasing proportion of the costs of instructional materials including textbooks, maintenance and operation of school plant, transportation, and capital outlay provided by the state (except for vocational education) has resulted in disparities in resources in these areas.

A problem that limits severely the efficiency and adequacy of state, county, and school district planning, financing, and management of public school programs in Tennessee is the lack of an effective computerized program cost accounting system. Without current, accurate, and complete information that such a system would provide, adequately understanding and effectively managing the complex $1.4 billion public school enterprise are extremely difficult and almost impossible. Inadequate management of information seriously handicaps the state government and most local districts in policy and strategy development, in budgeting, and in evaluating for such essential functions as organizing, staffing, and directing the public schools.

Fortunately, the cost of an adequate management information system, including an effective program cost accounting system, is no longer prohibitive. Today it is possible to purchase for a few thousand dollars a complete microcomputer system including the central processing unit, memory, keyboard/display, and software. Such a system permits use of high level computer language and has power exceeding that of a machine costing tens of thousands of dollars a few years ago. The State Department of Education has had the foresight to develop a program financial accounting system that will do the program cost accounting job if properly used. It remains for the state to allocate the resources, see that necessary equipment and software are installed, train personnel, and activate the system. Without an adequate statewide management information system, the problems of collecting and analyzing data concerning the costs and needs of legally defined and supported programs (such as are inside the TFP) are so difficult that the state is forced to use data from sampling studies three and four years old. Under these circumstances, those who must make decisions about financing the public schools must do so without knowing the current costs of the state defined grade level and instructional area programs. Neither can they have the information regarding the relative costs of programs essential for accurately weighting pupils in the TFP.

Additional matters of concern in planning for efficiency, adequacy, and equity in financing the public schools are:

1. the extremely small school districts which add unnecessary tax burdens for taxpayers and usually are less efficient than larger districts due to economies of scale possible in the larger districts.

Extremely small school districts usually are not able to attract personnel with all the varied qualifications needed to achieve high quality educational programs. Neither are they able to have highly qualified business management services. They tend to weaken the county system in which they are located by denying it resources needed to make the entire system strong. Often the tensions concerning funds are destructive rather than constructive.

2. the special guarantee funds which provide in some school districts benefits not justified by the measures of need applied for pupils in other school districts, and therefore, represent unjust windfalls.
3. the need to replace funds for compensatory education for the economically and socially handicapped if federal funding is drastically reduced or discontinued.

A problem overarching all other problems in financing the public schools relates to inadequacies in the state-local tax base. Data presented in this review indicate that for a number of years Tennessee has been up against the practical limits of its tax base for schools. Also, the heavy reliance upon unequalized local tax resources from property and sales taxes has resulted in unacceptably wide disparities per pupil among school districts in taxable resources available for public schools. Prior studies, such as Quindry's in 1978, have shown that because Tennessee does not have a broad-based, progressive, individual income tax, its state-local tax base is unnecessarily regressive, relatively unresponsive to economic growth, and inequitable when compared to the average state.

VI. UTILIZATION OF FACILITIES

Impact of Declining Enrollment on Facilities

Enrollment declines are creating problems with surplus or underutilized facilities throughout the country. The greatest impact from declining enrollments has been felt in the Northeast, the Midwest, and the far Northwest. Since 1975, some ninety public schools have closed in New York City, and it is estimated that 222 New York schools will be closed by 1990 (Dean, 1982, 6). Substantial enrollment declines have occurred in suburban Chicago school districts which is an indication that the problem is not solely an urban one (Boyd, 1982). Since 1962, Seattle has lost more than half of its school population (Narver, 1982, 1).

Tennessee and the Southeast have not experienced the drastic drops in enrollment found in other regions. Migration to the southeastern states over the past two decades has been partially responsible for this condition. Tennessee's population increased 11 percent from 1970 to 1978 and is projected to increase 14.2 percent in the 1980s (Kahley, 1981, 10). A changing population, declining birthrates, and increased nonpublic school enrollment have contributed, however, to a steady enrollment decline statewide for the last ten years.

Forecasters predict that school enrollments will take an upward turn in the mid to late 1980s in Tennessee and in the nation. Meanwhile, school districts are often faced with critical decisions concerning underutilized facilities. Many school systems overbuilt during the "baby boom" years of the 1950s and 1960s, and what to do with surplus buildings and extra personnel has prompted a great body of research on "Managing Enrollment Decline." How does a school district decide which schools to close? What should local governing bodies do with school buildings no longer needed? Are long-range plans needed for coping with expansion and reduction in enrollments? These and others are some of the questions local education agencies (LEAs) are trying to answer.

Facility Utilization in Tennessee

To assess the impact of declining enrollment on facility utilization in the state, a survey was conducted of the 147 school systems. The questionnaire was returned by 121 superintendents. Not every question was answered by each respondent; however, the results provide a representative picture statewide of current facility utilization. Responses to the questionnaire are discussed in the following paragraphs.

During the 1981-82 school year, LEAs reported sixty-eight usable school buildings not being utilized for K-12 instruction. The largest numbers of unused buildings were concentrated in urban areas: Metro-Davidson County, 11; Knoxville, 10; Knox County, 10; and Memphis, 5. Reasons given for closing schools in 1981-82 in order of frequency were consolidation of schools, desegregation plans, and declining enrollment.

LEAs were asked to indicate what had been done with usable school buildings that were not presently being utilized for K-12 instruction. The responses were: 50--have been or will be sold; 43--leased by community agencies; 36--used for storage; 12--used as Educational Resource Centers; 11-closed and boarded up; and 8--used for Adult Education. The largest number (12) that had been sold or would be sold were found in McMinn County. Knoxville and Lincoln County reported the largest number (5 each) leased by community agencies, and Metro-Davidson had the largest number (10) used for storage and for Educational Resource Centers (2).

When asked if the school district was currently experiencing a declining pupil population, seventy-six systems (67 percent of those responding to the question) replied in the affirmative. Thirty-seven districts indicated that they were anticipating a decline in enrollment. A little over one-fifth of the systems that were either experiencing or anticipating an enrollment decline stated that they would be faced with closing one or more schools in the near future.

Approximately 64 percent of the districts responding stated that an annual study concerning utilization of school facilities and projected needs was conducted by the LEA. In 72 percent of the districts, the administrative staff shared a declining enrollment profile (spot maps, school enrollments, building utilization, etc.) with the local school board. Only sixteen local school boards had a policy concerning school closure (program quality, minimum school size, etc.), and thirty-two LEAs had a system-wide school-board-approved plan for the utilization and disposal of buildings or space no longer needed. Community representatives were involved in the development of a plan for unused facilities in approximately 30 percent of the districts responding.

Emphasis on Community Education

Along with the trend toward surplus space in the United States is another fast growing trend, i.e., increased interest in community education and community schools. In fact, some see the second trend as offering "a partial solution to the 'problem' of the first: surplus school space can be used for community education" (Brubaker, 1980, 14). Community education might "be defined as 'education involving the community,' if those words had universal implications" (Epstein, 1980, 1). More specifically community education and community schools have been defined by the Tennessee Community Education Advisory Council in December, 1977 as follows:

> Community Education is a concept in which any buildings and/or facilities, including but not limited to public schools, colleges, and universities, are used as a community-center operated in conjunction with other groups in the community, community organizations and local government agencies, to provide educational, recreational, cultural and other related community services for the community that center serves in accordance with the needs, interests, and concerns of that community.
>
> The Community School is a delivery system through which the local school in concert with its community provides programs and services to meet the needs of people.

The concept of community education does away with the idea that school buildings are to be used only for formal instruction five days a week for nine months of the year. In addition to providing formal learning for people of all ages, community schools can be involved in the following programs and services: "preschool programs, human relations activities, employment assistance for those without jobs, improved services for welfare recipients, counseling for one-parent families, tutoring for children and parents, health and dental programs, extra library and study hall services for teen-agers and adults, services for senior citizens, environmental improvement, and summer jobs for teen-agers" (Epstein, 18). Other activities community education can embrace are recreation and leisure pastimes, enrichment courses, vocational training and retraining for all ages, cultural activities, afterschool child care, legal aid, and civic forums (Epstein, 2).

Community education and community schools are not new. Perhaps the earliest community school was the one-room schoolhouse in pioneer days where cultural, civic, and educational activities took place. Flint, Michigan, which is considered the model for community schools, is also where the modern day movement started over forty years ago (Epstein, 13-14). In 1974, the U.S. Congress passed the Community Schools Act as part of Public Law 93-380 which authorized funds for community education. In order to participate in these funds, a program was required to have eight minimum elements including involvement of a public school, service to an identified community and to all age groups, and interagency planning and involvement (Epstein, 8).

States and local education agencies have responded to the call for community education in various ways depending largely on the needs of the different communities, the amount of funding available, and their commitment to involving the entire community in the educational process. Some states have appropriated large sums of money to build community schools (e.g., New Jersey); some have used local and federal funds; and others rely completely on fees, local agency contributions, and school district funding. Apparently there is no one model for community education; further, successful programs do not occur overnight but evolve out of the needs of the community. A major role in all programs, however, is played by the superintendent, the local school board, the community education coordinator, the principal, the community advisory council, community members, and community agencies.

Aside from being a means for utilizing surplus space or underused facilities, community education can benefit schools in other ways, such as:

1. improving the quality of K-12 instruction through the use of volunteers for enrichment and tutoring
2. increasing the number of prime supporters for schools
3. improving the physical condition of buildings through citizen involvement and interest (i.e., people support what they use)

4. portraying a positive image of the school through the news media
5. increasing community cohesiveness (Epstein, 26-27).

All of these factors can enhance the public image of education and could possibly produce greater financial support for the public schools.

Community Education in Tennessee

Provisions for establishing community education programs were enacted by the General Assembly in 1978. The State Board of Education is authorized to "adopt appropriate rules and regulations for encouraging increased community involvement in public schools and the usage of the public school facilities as community educational centers" (T.C.A. 49-2401). Local boards of education are, also, authorized to develop programs and plans for increased community involvement in and use of the public schools according to guidelines established by the State Board (T.C.A. 49-2402).

Some schools in the state have active community education programs; others do not. The Tennessee Community Education Advisory Council recently approved a five-year plan for community education development in the state, and State Department personnel are active in encouraging participation in Adopt-a-School programs, aiding schools in establishing community education programs, and school volunteer services. A recent survey, conducted by the Advisory Council and the Department, assessed community involvement activities at the local school level.

Twenty school systems reported having councils (one or more) designated as community advisory councils and twelve systems employed a person whose primary job was community education coordinator. Twenty-nine systems indicated that this role was filled by someone employed by the school system in another position or by a cooperating agency. The principal at each building site was responsible for scheduling extended usage of facilities in 97 school systems, and eleven systems indicated that a staff position in the central office at each building site had this responsibility.

School systems were asked to indicate activities which they currently provided beyond the regular K-12 program. Some of the activities most frequently provided were: adult basic education, GED training, adult vocational education courses, university sponsored courses, site for voter registration/polls, meeting place for youth activities, health screening for K-12 students, after school intramurals, PTA/PTO, and parent involvement (Title I).

School systems were asked to rank a variety of assistance concerning the development of school/community partnerships offered by the Department of Education in order of need. The areas listed most frequently as needed were:

1. training for persons who have or would potentially have a direct role in school/community education planning and/or development
2. general awareness of community education (what it is, history, funding sources, models)
3. assistance in the establishment of a community education feasibility study
4. assistance in planning and implementing career education programs
5. assistance in developing and implementing an evaluation design for school/community projects
6. assistance in developing specific school/community partnership efforts such as senior citizens involvement, home-school communication, community relations, parent education.

Conclusions

There appears to be a need for system-wide planning by LEAs statewide regarding school closures and the disposal of surplus or underutilized facilities. Such a plan needs to be developed on a long-range basis if possible to allow school systems to pro-act and not react to changing enrollment patterns.

One of the greatest hopes for improving the image of public education and the quality of K-12 schooling is more citizen involvement. The community education concept represents a viable means to this end. LEAs should work toward involving community agencies more in discovering productive uses for underutilized space, and in improving educational quality.

Respondents to the K-12 Survey were asked to rate their school system's progress toward the community school concept. The consensus of all groups was fair to good. The efforts of LEAs to involve the community in school activities is applauded, but the importance of this endeavor for the future of public schools should be stressed by the State Department of Education and assistance to LEAs offered when possible.

RECOMMENDATIONS ADOPTED BY THE K-12 SUBCOMMITTEE

After reviewing the research and the available data, the K-12 Subcommittee made the following recommendations directed toward improving the overall quality of elementary and secondary public education in Tennessee. Hopefully, all persons involved in the public schools will consider these recommendations in future planning.

I. GOALS

Short-Term

1. Statewide Goals. The State Board of Education should adopt the following twelve (12) goals as the "Goals of Education, Kindergarten through Grade Twelve." These goals should replace the ten (10) goals presently established by the State Board.

A. Academic Goals

Every Person Should:

Develop skills in reading, writing, speaking, and listening.

Develop skills and attitudes which facilitate learning.

Have competence in the fundamentals of mathematical concepts, principles, and skills.

Gain a general education.

B. Personal Goals

Every Person Should:

Develop pride in work and a feeling of self-worth.

Develop good character and self-respect.

Know the principles, habits, and attitudes conducive to good physical and mental health.

Have sufficient information to realize his/her life goals.

C. Social and Civic Goals

Every Person Should:

Know and practice the basic requirements of responsible citizenship.

Establish and maintain satisfactory relationships with other persons.

Understand and practice democratic ideas and ideals.

Develop skills to enter the world of work.

2. Local Goal Setting. Each local board of education should set specific educational goals for its school system within the context of the goals established by the State Board of Education.

3. Progress Toward Goals. A system for evaluating each school system's progress toward achieving state and locally established goals should be devised by the State Department of Education and such evaluation should be required periodically by the State Board of Education.

II. GOVERNANCE

Short-Term

State Governance

1. The Commissioner and the State Board of Education should continue to have the responsibility for the governance and administration of all programs directly or indirectly related to kindergarten through grade 12.

2. The governance of the four State Special Schools (Tennessee Preparatory School, Tennessee School for the Deaf, Tennessee School for the Blind, and Alvin C. York Institute) should remain under the jurisdiction of the State Board of Education at the present. As soon as it is feasible, the State Board of Education, the State Department of Education, and the General Assembly should investigate the various problems at each school and develop recommendations for improving programs and conditions at the Special Schools.
3. The K-12 Subcommittee voted to recommend that the General Assembly investigate alternatives for the governance of postsecondary vocational-technical education including, but not limited to, the following:
    - A. The governance and administration of all postsecondary programs under the authority of the Commissioner and the State Board of Education should be moved in the future to a different board, either a new board or an existing board, as the case may be. This would include all postsecondary vocational-technical programs including the 27 area vocational schools, the four state technical institutes, Adult Basic Education, Veterans Education, CETA, Vocational Rehabilitation, and Disability Determination.
    - B. Utilizing the present structure of the State Board of Education, an Executive Board for Vocational-Technical Education should be created to serve as the governing body for all postsecondary vocational-technical educational programs presently under the State Board of Education.
4. Serious consideration should be given to requiring that all elementary and secondary nonpublic schools be approved by the Commissioner and the State Board of Education.

Selection of the State Board of Education and the Commissioner

1. Various alternatives were presented to the K-12 Subcommittee for changing the present methods of selection for State Board of Education members and the Commissioner of Education; however, the Subcommittee was unable to reach a consensus. The Subcommittee voted to recommend that the General Assembly further study present procedures for selecting State Board members and the Commissioner.
2. The K-12 Subcommittee, also, recommends that the General Assembly examine the length of term for State Board members in regard to shortening the term and maintaining staggered terms for all future appointments.

Functions of the State Department of Education

1. The Commissioner should continue to serve as the administrative officer of the Department of Education, and the State Board of Education should continue to function as the policy-making body in regard to rules, regulations, and minimum standards for the Department of Education.
2. The primary functions of the State Department of Education shall include:
    - A. advisory capacity to local education agencies
    - B. program evaluation and research
    - C. leadership for local education agencies
    - D. regulatory agent for local education agencies
    - E. monitoring agent for local education agencies.
3. In order to advise local systems and to carry out its leadership role, the Department should establish a data bank and clearinghouse for information and all research projects. Such a division should be responsible for the

coordination of all data collection and data processing activities in the Department; should serve as a liaison between the Divisions; should disseminate information upon request to the public and the General Assembly; and should work toward improving the public image of education in the state.

4. All Divisions of the Department should work together more closely in coordinating activities and sharing information.
5. Forms required to be completed by LEAs should be reduced where possible, and duplication of information on required forms for LEAs should be eliminated.

Local Governance

1. The General Assembly should review all sections of Tennessee Code Annotated pertaining to membership on local boards of education in light of enacting a general provision to provide for determining an appropriate number of members for local boards of education within the range of five (5) to twelve (12) members.
2. The General Assembly should investigate the possibility of enacting legislation to provide for uniform lengths of terms not to exceed six (6) years for elected local board members and for staggered terms statewide.
3. The General Assembly should consider amending Tennessee Code Annotated by changing the office of county superintendent from its present status as a county office and providing for the selection of a county superintendent by three methods: the county commission, election by the people in the school district, or selection by the local school board.

4. Tennessee Code Annotated, Section 49-222 should be amended to allow the State Board of Education to set standards for the certification requirements for superintendents which exceed the minimum standards established by statute, provided any additional requirements would not apply to superintendents presently certified under T.C.A. 49-222.

Organization of Schools

1. Small school districts should be reviewed in light of their cost effectiveness with the idea of possibly tightening further the limitations on the creation of new school districts and the number of school districts presently allowed within counties.
2. School districts are urged wherever possible to keep the grade spread of their schools in conformity with the definitions of schools found in the Code.
3. Serious consideration should be given by school districts, wherever possible, to establishing schools with several consecutive grades, i.e., more than one or two grades per school. More parental and community support is found for schools that children can attend for more than one year; also, more continuity is possible in instruction and less adjustment each year is needed for students.
4. Nonpublic schools should be defined in terms of organization (i.e., number of students, number of teachers, etc.) and such a definition should be included in the Code.
5. Tennessee's compulsory attendance age should remain "between the ages of seven (7) and sixteen (16) years, both inclusive" (T.C.A. 49-1708).

6. It is not recommended that a statewide opening date for all schools be mandated, but the administrators of each LEA are strongly urged to consider the wishes of the parents and teachers in their district in establishing opening and closing dates for their schools.

7. School administrators (boards, superintendents, and principals) should investigate all possible scheduling arrangements to provide every teacher at least one period for class preparation within the present school day. If possible, this should be done by hiring where necessary additional appropriately certificated staff for P.E., art, music, etc. Cooperation among teachers in effecting this should be explored and possible usage of qualified community members.

Long-Term

1. As soon as it is possible to provide the additional state and local funding needed, kindergarten attendance should be mandatory.

2. If kindergarten attendance becomes mandatory, the entrance age should be changed from "five (5) years of age on or before October 31 of the current kindergarten term" to "five (5) years of age on or before September 30th of the current kindergarten term" [T.C.A. 49-2305 (c)]. This change would bring the required kindergarten entrance age in line with the required entrance age (6 on or before September 30th) for the first grade (T.C.A. 49-1702).

III. QUALITY

Regular Academic Programs

Note: Identified and served handicapped students are exempt from any of the following requirements which conflict with Individualized Education Programs (IEPs).

Short-Term

Statewide Testing Program

1. A statewide testing program using norm-referenced national achievement tests should be established for all students in one (1) of the primary grades and in one (1) of the intermediate grades.
2. The State Board should develop within a two-year period a Basic Skills Certificate which students shall attain before entering high school. Such a certificate will be awarded when a student demonstrates an acceptable level of proficiency on a statewide Basic Skills Examination. Such a test should replace the State Minimum Proficiency Test.

Curriculum Requirements

1. The State Board of Education should continue to examine curriculum requirements for all grades, including time requirements for Language Arts and Mathematics in Grades 1 through 8.

2. Any curriculum revisions for Grades 1-8 should allow for the following amount of time to be spent on these subjects:

Language Arts	Grades 1-3, 15 hours per week
	Grades 4-8, 10 hours per week
Mathematics	Grades 1-3, at least 5 hours per week
	Grades 4-8, 5 hours per week.

3. Curriculum requirements should include formal reading instruction in Grades 7 and 8.
4. LEAs should arrange student school schedules so that 80-90 percent of the school day is spent on classroom instruction in Grades 1-6; and 85-95 percent of the day is spent on classroom instruction in Grades 7-12.
5. LEAs should place primary emphasis on achieving basic skills in Grades 1-8, by outlining minimum specific objectives and skills to be mastered at each grade level before promotion to the next.
6. The State Board of Education should increase the present graduation requirements to include one (1) additional unit in Mathematics, one (1) additional unit in Science, and one-half (½) additional unit in Social Studies.
7. LEAs should be required to review all curriculum offerings in Grades 9 through 12 including vocational courses and eliminate courses that are outdated and not relevant to the future demands of society.
8. The State Department of Education and LEAs through a cooperative effort should establish more flexible guidelines to allow students to take one-hour, two-hour, or three-hour vocational courses with scheduling consideration given to the junior and senior years.

9. All LEAs should place more emphasis on programs for gifted students, and should consider using Chapter II funds where possible for such programs.

10. A program accounting system as recommended in Number 1 under Funding should be established to provide needed data on the expenditure of handicapped funds for identified and served intellectually gifted students.

Textbooks

1. The State Textbook Commission should consider reducing at the state level the number of books for adoption by local systems.
2. The textbook adoption cycle at the state level should begin earlier than July to allow adequate time for review of all books.
3. If the State Textbook List is reduced at the state level, it should include in Grades 1-8 at least two textbooks at grade level for each subject in each grade, at least two textbooks below grade level in each subject, and at least two textbooks above grade level.
4. State and local school officials should let publishers know what kinds of books they want (content, reading level, etc.).
5. An arithmetic textbook should be required for adoption in Grades 1 and 2.
6. LEAs should be encouraged to adopt and use at least one textbook in each subject at grade reading level in all grades.
7. Careful study by the State Department of Education should be given to ensure adequate instructional materials for each classroom.

8. LEAs should be encouraged to retain textbooks if they are usable and appropriate beyond the five-year adoption cycle provided such textbooks are on the state approved textbook list.

9. A panel of expert teachers in each subject area should be chosen to advise Textbook Commission members on book selections. The teachers selected will receive the same reimbursement as Textbook Commission members.

Microcomputers

1. The State Department of Education should assume a leadership role in:
    A. developing lists of available software, computer resource people, and effective computer-utilization locations for LEAs
    B. developing models for inservice training for teachers in computer usage for both computer-assisted and computer-managed instruction
    C. investigating the potential of microcomputers for usage by small school systems for instruction in courses where qualified teachers are not available.
2. LEAs should assure adequate inservice training in computer usage for office staff and for all teaching personnel before computer literacy, computer-assisted, and computer-managed instruction are attempted.
3. LEAs, where possible, should exchange effective software.
4. The use of microcomputers for computer-assisted instruction for remedial purposes and for high achievers should be stressed where facilities are limited.
5. Computer literacy should be included in the high school curriculum as an elective, not a requirement.

Teacher Preparation

1. All teacher preparation institutions in the state and the Division of Certification in the Department of Education should review teacher preparation programs in regard to:
   - A. the amount of field experience students receive in college
   - B. the amount of subject area content required
   - C. the possibility of combining specialty areas in teacher preparation programs with graduates being prepared to teach in more than one area.

Teacher Certification

1. The State Board of Education should review present certification requirements in regard to the number of credit hours required for certification in specific subject areas (in particular, in reading for elementary teachers, and in all subject areas for secondary teachers), and should increase requirements as needed to bring Tennessee's certification requirements in line with other SREB states.
2. The State Board of Education should consider requiring an apprenticeship program for beginning teachers prior to professional certification. During such a period, the apprentice-teacher would be closely supervised and evaluated by a "master teacher."
3. The State Board of Education shall continue to use the National Teacher Common and Areas Exams (where available) or a state-developed test in testing persons seeking initial certification to teach.

Inservice Education

1. The State Department of Education should establish inservice training models for LEAs including, but not limited to, the following areas:
   - A. effective teaching techniques and methods for different types of students
   - B. classroom management techniques
   - C. positive attitudes of teachers toward all students' ability to learn
   - D. training principals and other staff members to be instructional leaders
   - E. emphasis on basic skills
   - F. computer usage
   - G. evaluative procedures for principals and other administrators
   - H. mainstreaming of handicapped students.
2. The State Department of Education should set guidelines for inservice education that:
   - A. provide for input from teachers as to needs, goals, and activities
   - B. place teachers in an active role
   - C. are school-based
   - D. provide opportunities for teachers to share and provide assistance to each other
   - E. are coordinated with goals set by individual schools and school systems
   - F. provide for evaluation of inservice activities in regard to staff development and future planning.

Personnel Evaluation

1. Uniform evaluation instruments should be developed at the state level for all certificated personnel and required for usage by LEAs.
2. In developing or providing such an instrument, the State Department should utilize current research on evaluative techniques and statewide practices.
3. LEAs should be encouraged to use evaluation procedures for the primary purpose of staff development and improvement.
4. If possible, evaluation of school personnel should be performed at the school building level and not by system-wide personnel.

Long-Term

Teacher Pay

1. The state should set as a long-range goal raising the level of the average teacher's salary in Tennessee to the average teacher's salary of the states bordering Tennessee.
2. The State Board of Education should consider extending the experience factor in the State Minimum Salary Schedule beyond the present fifteen years for teachers and sixteen years for superintendents to include three longevity increments to be earned after 20, 25, and 30 years service.
3. The State Board of Education should consider increasing the add-on factor for principals' salaries.

4. The State Board of Education and LEAs should investigate ways of rewarding outstanding teachers (as determined by fair and impartial evaluation) over and beyond their set salaries.

School Approval

1. The State Department of Education should continue its reorganization of the school approval process with the elimination of as much paper work as possible.
2. School approval should become more meaningful and a viable means of improving the quality of schools by requiring each LEA to assess its progress toward established goals. Such progress should be monitored by the state every three years.
3. The procedure of issuing waivers particularly for oversize classes should be reviewed carefully. A redefinition of class size requirements utilizing average size classes within a school setting should be considered.

Special Education Programs for the Handicapped

Short-Term

1. Tennessee special education programs should fulfill the following functions in accordance with the quality indicators listed under each function in B. Section IV of Chapter Four.
   A. Should teach students with handicapping conditions the skills necessary to participate more independently and more effectively in family and community life.

B. Should encourage handicapped students to participate actively in normal school functions and should foster among all students an increased awareness of and appreciation for "differentness" in whatever form.

C. Should incorporate the family in making decisions about and carrying out educational programs for students with handicapping conditions.

D. Should encourage the building of an effective cadre of professionals and paraprofessionals who can meet the educational needs of students with special learning problems.

E. Should work in close conjunction with regular education programs and should include a range of placement options for those students whose needs require more specialized attention than regular teachers can provide in full-time regular classrooms.

F. Should encourage the active participation of the community in services for students with handicapping conditions.

Long-Term

1. The Division for Education of the Handicapped and other agencies involved in the administration of special education programs should work toward developing a truly comprehensive and coordinated system of educational services for students with handicapping conditions by investigating the following areas:

   A. Effective coordination of educational programs. The possibility of organizing under the umbrella of the Division for Education of the Handicapped all educational programs for students with handicapping conditions should be investigated.

B. *Effective coordination of educational and noneducational programs*. Agencies providing services to handicapped students should find ways of more efficiently coordinating educational and noneducational services to provide maximum benefits for students and the community.

C. *Funding*. Particular attention should be paid to how funds appropriated for special education are actually spent. The fact that no funds are appropriated for new buildings and/or renovations should be studied.

D. *Parent and community involvement*. Ways need to be found to involve parents and interested members of the community in more policymaking and evaluation activities.

E. *Inservice training models*. Development of more effective inservice training models should be carefully considered.

F. *Program evaluation*. Much work needs to be done in evaluating the long-range effectiveness of various programs and teaching methods.

G. *Quality concerns*. Administrators need to seek ways to move from compliance issues to quality issues. Minimum standards should be developed, and incentives could be offered for quality programs and quality performance by program personnel.

2. The State Board of Education and the State Department of Education should investigate the possibility of establishing a state school for the gifted and talented to encompass all subjects.

IV. FUNDING

Short-Term

1. An effective computerized program cost accounting system should be installed at the school district level to provide accurate and timely school and school district data needed by the school districts and by the state. Such a system is fundamental for determining fiscal requirements for meeting educational program needs, allocating the necessary funds, monitoring program implementation, evaluating the results, and planning improvements.
2. The state should renew, update, and publish each year a comprehensive review and analysis: of the costs of educational programs defined, mandated, or funded by the state; of public school finance trends; and of major problems and issues in financing the public schools, their underlying causes, and alternatives for their solution. This information is vital for those who make policy and other decisions about financing the public schools.
3. The pupil weightings used in the foundation program in allocating funds among programs should be continuously monitored to keep them accurate and fair. The single add-on weighting used for the additional costs for the education of children with handicapping conditions should be replaced with weightings that accurately reflect the costs for services for the various handicapping conditions.
4. The measure of the relative taxpaying ability of Tennessee counties used in the foundation program to determine each county's local contribution to the TFP is inaccurate and should be replaced for the 1983-84 school year.

The procedure set forth in Financing Public Schools in Tennessee in the section on Relative Taxpaying Ability of Tennessee Counties is recommended (Table C-20 in Appendix C).

5. Specific provisions for meeting the costs of maintenance and operation of school plants should be provided on a per pupil ADA basis or on a categorical funding basis within the TFP.
6. The textbook allocation should be brought within the foundation program since it is closely related to other teaching materials and instructional programs now in the TFP, provided there is no reduction in the dollar amount per pupil.

Long-Term

1. The local salary supplement for teachers mandated by the state places an unequal burden upon local school districts and, therefore, should be included in the foundation program and equalized.
2. In long-range planning for financing the public schools, the state should plan for the replacement of funds for present federal programs of proven quality and success if the federal government should further drastically reduce or discontinue its funding for these programs.
3. The General Assembly should establish a goal of funding in the foundation program the full necessary costs of all basic programs in the public schools, kindergarten through grade 12. The state should do the necessary planning and make the needed financial arrangements to accomplish this goal. The state should plan for and establish an improved tax base for the public schools that is equitable, progressive, and responsive to economic growth and will produce the revenue to fully fund on an

equalization basis the programs considered necessary and desirable in the public schools, kindergarten through grade 12. The Governor and the General Assembly should appoint a task force composed of legislators and leading citizens to develop an action plan for the implementation of this recommendation within a three-year period.

4. Longstanding guarantee provisions in the foundation program for operational or pupil transportation funds should be phased out within a five-year period. Guarantee funds for capital outlay should be phased out within a five-year period or the life of existing bonds for which such revenue has been pledged.

V. UTILIZATION OF FACILITIES

Short-Term

1. The State Department of Education should encourage local boards of education to develop plans for the utilization or disposal of surplus buildings or space based on enrollment projections.
2. Local school boards should work with other community agencies in developing plans for underutilized facilities.
3. All local education agencies should be encouraged to assume a leadership role in formulating community advisory councils.
4. The State Department of Education should provide increased assistance to LEAs in planning and developing community education programs.

CHAPTER FIVE

VOCATIONAL-TECHNICAL EDUCATION

I. INTRODUCTION

The idea of preparing students for work in Tennessee is not new. Toward the beginning of the twentieth century an increasing number of students were attending high schools that began to offer practical subjects designed to train the hands as well as the mind. Manual training subjects, home economics, business, and agricultural courses attracted many students. Also around the turn of the century, manual training educators and agricultural and industrial leaders began to publicize the need to prepare people for specific occupations.

Vocational education was first offered in public schools during a thriving period of industrialism. Management in the private sector largely felt that the needs of the workers were secondary to the needs of the economy. The goals of vocational education at that time were to meet the rapidly changing demands of the labor market. It was only after many years, starting in the 1950s, that concern for the human potential became the dominant thought. The 1963 Vocational Education Act and subsequent Amendments reflect this thought and the importance of meeting both economic and human needs.

Vocational and technical education programs today are much more varied in content, employ more sophisticated instructional methods, and attempt to teach much more than occupational skills. While a major objective is still to prepare people for work in order to meet the needs of the economy, a second objective is increasing the employment options available to each person. Vocational education has become concerned with developing flexible occupational and decision-making skills so that students, on whatever level, may realistically choose from many occupations. A third objective is motivating the student to learn basic academic skills.

The most important aspect of maintaining a viable and effective vocational-technical delivery system is the flexibility of the curricula and program offerings. The changing economy and development in technology, business, and industry require acquisition of new skills on a continuous basis. Research has to be carried out constantly to keep curricula up-to-date and responsive to changing needs. It is also becoming increasingly likely that people will change occupations in their lifetime. For these reasons, a comprehensive study of vocational-technical education is exceptionally timely.

Prior to the study efforts carried out by the Tennessee Comprehensive Education Study, there had not been a comprehensive statewide study of vocational-technical education on the secondary and postsecondary level in Tennessee. There was no guideline, base, or previous study upon which to build. A study design was adopted by the Vocational-Technical Subcommittee of the Task Force and four major areas were identified for detailed study. Many methods were utilized in gathering information during study deliberations, and it is felt that the literature, survey response, and expert testimony solicited adequately provided the rationale upon which all recommendations were made.

II. GOALS FOR VOCATIONAL EDUCATION

Two passages found during research efforts on the identification of goal statements for vocational-technical education in Tennessee were particularly representative of what had been written concerning the purpose and the role of vocational education.

> Vocational programs should facilitate occupational mobility as a means of keeping our supply of human resources in balance with society's needs. The philosophy of vocational education has been affected by philosophical, economic, and sociological factors and the availability of vocational education affects the economic welfare of the nation in that it is an intermediary between technology and labor (Calhoun and Finch, 1976, 17).
>
> Vocational education includes more than manipulative skills, it includes both mental and manual skills, and is concerned with attitudes and values. Vocational education includes the cognitive, the psychomotor, and the affective elements of behavior required of the competent worker. Vocational education is humanistic. Meeting manpower needs *only* has shifted. While this is an important factor, the emphasis has shifted to vocational education enriching the lives of the people it serves (Wenrich, 1974, 33).

The passages stated above reflect the belief that vocational education requires much more than skill training. Three of the best known theories on what vocational education should encompass are conservative, liberal, and moderate. The *conservative* theory is narrowly defined and maintains that vocational education should essentially be skill training, occupational specialization, and that it should "be concerned with the preservation of historic values" (Dunham, 1980, 2). The *liberal* theory is broad and includes more career exploration before and during high school, more guidance services, and more emphasis on decision-making skills. This theory also advocates less occupational emphasis in the school setting and supports increased specialized training by industry. The *moderate* theorist tries to combine the best of two worlds. This theorist calls for some distinction to be made between vocational courses and academic courses, but recognizes the importance of their linkage. The moderate also advocates more work experience as a part of the training program, greater attention to special needs groups, and more emphasis on effectiveness and results (Dunham, 1980,2).

The Federal Pole

The literature reviewed on the role and scope of federal influence indicated that the Vocational Education Act and Amendments should serve as a directional outline for the states in carrying out their responsibility as providers of public education. One author, speaking on behalf of the National Center for Research in Vocational Education, suggested that the following statements most clearly reflect the intention of federal legislation:

1. the importance of preparation for work as a legitimate function of education
2. the emphasis on equity, quality, and access
3. the strengthening of economic self-sufficiency through a better educated, trained, and thus more productive work force
4. the extension of influence beyond school
5. upgrading, retraining, and industrial training
6. a closer working relationship with other human resource development and training agencies (Dunham, 1980, 3).

More specifically, the direction of vocational education has been influenced by three key legislative enactments: the Smith Hughes Act of 1917, the Vocational Education Act of 1963 (which is currently being considered by Congress for reauthorization), and subsequent Vocational Education Act Amendments. The 1917 Act introduced funding for secondary school training.

The 1963 Act encouraged a shift in philosophy from specific occupational training and short term labor market demands to an emphasis on the development of human potential and long-term employment. The Amendments of 1968 continued the emphasis on serving the needs of students by promoting better service for the disadvantaged, the handicapped, postsecondary students, and adult students. This legislation also initiated support for career education, which stresses career planning as a part of employment preparation (National Academy of Sciences, 1976, 8).

The efforts of interested citizens, organizations, and state governments influenced the language of federal legislation. Even though these enactments served as guidelines eventually followed by all states, individual states developed their own philosophies and levels of service within the guidelines. For example, there are significantly different philosophies within the various states for the administration and control of vocational education. Wisconsin has a unique program that emphasizes vocational education at the postsecondary level, with little emphasis on high school programs. In Ohio, the State Division of Vocational Education has primary responsibility for secondary school programs, but postsecondary programs are under the direction of the State Board of Regents. California has a well developed community college and technical school system which provides free, postsecondary education for state residents. Colorado has a State Board for Vocational Education and Community Colleges which administers both secondary and postsecondary vocational and technical education (Calhoun and Finch, 1976, 260).

Research also indicated that the organization of vocational education is closely related to the political power base and financial condition of each state. The goals established by the officials in the state responsible for vocational education can strongly affect funding, governance, student attainment levels, quality of the programs, and ultimately the economy of the state. Goals, as direction setters, should be comprehensive enough to encompass the field of vocational education and specific enough to give clarity of purpose.

Instructional Goals

The instructional goals of each institution involved in the delivery of vocational-technical instruction should be compatible with the statewide goals. Rupert Evans in his "Foundations of Vocational Education" described the importance of consonance between the goals for all vocational education and instructional goals. The three basic objectives offered were: (1) meeting the manpower needs of society, (2) increasing the options available to each student, and (3) serving as motivation to enhance all types of learning. Instructional outcomes should be representative of these objectives (Wenrich, 1974, 37).

Principles and Philosophies of Vocational Education

Grosso and Shea, researchers best known for their work on student attainment results as evidenced through the National Longitudinal Studies, described the goals of vocational education as having four recurrent themes:

1. reducing unemployment, especially among youth by developing marketable skills
2. providing a wide array of schooling options, responsive to the different needs, interests, and abilities of students
3. meeting employer needs for skilled manpower in the vocational-technical area

4. preparing persons historically outside the mainstream for employment (Grosso and Shea, 1979, 21).

Other studies substantiate these recurring themes by explaining the various assumptions, philosophies, social implications, and purposes of vocational education.

The National Advisory Council on Vocational Education (NACVE) in a general report entitled "Vocational Education - The Bridge Between Man and His Work," presented ideas on the social implications of vocational education. The first assertion presented had to do with vocational education being the right of everyone who desires it and can profit by it and the responsibility of the schools to provide for it within the curriculum. This assertion establishes the need for a more inclusive vocational program that is based on the needs of the individual and on work opportunities. Secondly, vocational education was described as a continuous process from early childhood throughout life. The four levels described within this process were informational, orientational and exploratory, preparational, and upgrading and retraining. The third assertion compared general education with vocational education by advocating both as being equally important to the other. The Advisory Council concluded by explaining that vocational education programs could be "non-blocking career ladders," and that they can be planned to complement the goals of general education (NACVE, 1968, 192-195).

A more recent set of goal statements for vocational and technical education was developed at a meeting of the National Association of State Directors of Vocational Education. The statements were created to communicate the state directors' position on the reauthorization of the Vocational Education Act, scheduled to be acted upon in 1983. The ten statements are listed as follows:

1. support and strengthen the relationship of education to work

2. equip individuals with marketable skills
3. foster full employment by providing a trained work force to meet current and future labor market needs
4. supply a trained work force which will attract and promote economic and industrial development
5. furnish individuals with information about the nature of work and work opportunities today and in the future
6. provide equitable opportunities for all persons to succeed in programs of education for work
7. help people develop and apply decision-making skills, particularly regarding work and careers
8. assist persons in mastering the basic literacy skills required to meet job specifications
9. develop organizational and leadership skills
10. promote and support the values of free enterprise in a democratic society (National Association of State Directors, 1981, 10).

Direction from Tennessee Code Annotated and Public Acts

Upon inspection of the Tennessee Code Annotated (T.C.A.), Volume 9, it was found that there are no goals for all vocational education in the State of Tennessee. There are, however, laws that serve as a framework for many of the policies and guidelines by which vocational and technical education in the state operates. T.C.A., Sections 49-2602, 49-2607, 49-2609, 49-2610, and 49-2709 define an area vocational-technical school, give the purpose of the area school, establish a system of area schools and technical institutes and give their purpose and service population, and establish comprehensive vocational education for grades nine through twelve.

The community college system began in 1965 when the General Assembly authorized the first three through Senate Resolution No. 25, Public Acts of 1965. The legislation did not establish a specific mission for these institutions, but the evolutionary process has resulted in institutions with divisions consisting of humanities, social science and education, career technical and continuing education, sciences and mathematics, and library services. It was agreed, before the first college was built, that the college would serve the needs of the community. For this reason they were called community colleges rather than junior colleges (Rhoda, 1979, xxvii).

Role and Scope of Secondary and Postsecondary Vocational-Technical Education as Approved by the State Board for Vocational Education

The secondary role and scope, as adopted by the State Board on May 6, 1982, is as follows:

> Secondary vocational programs should be designed to reinforce the basic goals of general education by:
>
> 1. providing sufficient career information and experience to help each student make necessary occupational and/or educational decisions
> 2. providing students an opportunity to acquire knowledge and experience in several occupational areas that will allow them to make a wiser selection from specialized occupational education areas
> 3. providing opportunities to strengthen each student's competence in the fundamentals of basic learning skills, communication skills, leadership skills, and human relations skills
> 4. providing opportunities for the development of appropriate job entry level skills and positive work attitudes necessary for job entry and retention
> 5. providing information for entry into training programs in area vocational schools, technical institutes, community colleges, universities, apprenticeship training and/or military services (State Board of Vocational Education, 1982, 1).

The postsecondary role and scope, as approved by the State Board on June 10, 1982, is as follows:

> The role and scope of adult and postsecondary vocational education is to serve the people of Tennessee and to meet the needs of business and industry. These programs are designed for persons seeking training which requires less than a baccalaureate degree. Programs lead to an associate degree, diploma or certificate of proficiency.
>
> Technical institutes and community colleges have two goals (community colleges have other goals as well).The first goal is to organize educational programs which are directly related to the preparation of individuals for employment. These programs are designed to prepare individuals for employment in a specific occupation or a cluster of occupations. The second goal is to cross-train or upgrade employed adults as paraprofessionals or technical workers to meet the needs of business and industry. The area vocational-technical schools have two goals. The primary goal is to provide non-degree occupational training for preparatory skills or supplemental training for adults, post high school youth, and school dropouts. The secondary goal of the area vocational-technical school is to provide occupational training for secondary school youth when appropriate programs are not available at the secondary school level. All vocational education institutions will provide the necessary training to meet the immediate and requested needs of existing and prospective business and industry (State Board for Vocational Education, 1982, 1).

Vocational-Technical Education Survey

The following goal statements were included on the vocational-technical survey administered by the Tennessee Comprehensive Education Study staff. The staff believed that these goal statements: (1) adequately reflected federal and state legislative intent, (2) were compatible with the major purposes and philosophies of vocational education as revealed in the literature, and (3) provided the Subcommittee on Vocational-Technical Education with a strong foundation for goal setting. The goal statements are listed in the order in which they appeared on the survey.

1. Promote new industry and business throughout the State of Tennessee by providing skilled labor.
2. Promote trade, technical or business-related employment for all graduates of vocational-technical programs.
3. Improve the composition of the labor pool throughout the state by providing training opportunities in specified areas of need.
4. Develop the occupational awareness and decision-making skills of students at all levels of vocational-technical instruction.
5. Enable men and women to gain occupational access in both traditional and nontraditional roles.
6. Provide vocational-technical education at whatever life stage the occupational training is needed.
7. Develop in students pride in work, a sense of accomplishment, and a feeling of self-worth from a task well done.
8. Complement the goals of all education in that through employment, the quality of life improves.
9. Provide the opportunity for persons who are underemployed to experience upward mobility in employment through additional occupational training.
10. Provide occupational training for special needs populations including the handicapped and the economically disadvantaged.
11. Promote student mastery of basic skill development in the areas of reading, communications, and mathematics.
12. Develop in students the desire to seek future training as occupational opportunities change.

Results of Goal Statement Section on Vocational-Technical Survey

On the Vocational-Technical Questionnaire, three major groups, administrators, instructional personnel, and business/advisory groups, responded to twelve goal statements. First, the respondents indicated the importance perceived for each goal on a scale of one through eight. Categories from which to select included: Highest Importance, High Importance, Medium Importance, and Low Importance. Second, respondents indicated the five goals they believed to be the most important to vocational and technical education in Tennessee by placing a check beside the goal.

Overall, the goals that received high rankings (in ranked order) were: 7, 1, 2, 4, 3, 8. Goals that received medium rankings were: 9, 11, 6, 5, 12, and 10. None of the twelve goal statements had a consensus ranking of low importance. The highest goals had consensus intensity between 100 and 85 percent, that is, all survey respondents indicated that these goals had either highest or high importance. All medium goals had consensus intensity between 84 and 74 percent or were placed on the scale between high importance to medium importance.

Each goal statement had a score that was transcribed into a ranking. This ranking indicated the number of times a goal was checked as one of the five most important and was examined for consensus intensity. Proper statistical measures were taken to compare unequal size groups.

Administrators including the presidents of technical institutes and community colleges, superintendents and directors of area vocational-technical schools, and principals of comprehensive high schools and vocational centers represented 23.6 percent of the respondent group. The administrative group selected the goals (in the order of highest rank): 7, 1, 2, 4, and 3 as the most important goals for vocational and technical education. Other rankings in order of importance were: 6, 8, 9, 11, 5, 10, and 12.

The business/advisory group, which was comprised of randomly selected employers of graduates, general advisory committee chairpersons of county and city school systems, and chairpersons of general advisory committees from all community colleges, area vocational-technical schools, and technical institutes, made up 27.2 percent of all groups responding to the goal statements. The five most important goals selected by this group were: 7, 3, 1, and 9. Goals 2 and 4 tied for fifth and sixth place. Other goals were ranked in this order: 8, 11, 12, 5, 10, and 6.

The instructional respondent group was comprised of randomly selected vocational-technical instructors in comprehensive high schools, vocational centers, area vocational-technical schools, community colleges, technical institutes; coordinators of instruction at community colleges, technical institutes, and area vocational-technical schools; and coordinators of pupil placement at all schools mentioned above except comprehensive high schools. This group represented 49.2 percent of the respondents. The five most important goals selected by this group in order were: 7, 1, 4, 2, and 8. The remaining goals were ranked in this order: 3, 9, 11, 6, 5, 12, and 10.

The following table compares the goal rankings by the combined total and by the categories of responding groups:

COMPARISONS OF GOAL RANKINGS

TOTAL	TOTAL		ADMINISTRATORS		ADVISORY/BUSINESS		INSTRUCTORS	
Item	Score	Rank	Score	Rank	Score	Rank	Score	Rank
1	354	2	91	2	98	3	165	2
2	294	3	78	3	65	5-6	151	4
3	283	5	66	5	102	2	115	6
4	293	4	67	4	65	5-6	161	3
5	181	10	43	10	46	10-11	92	10
6	195	9	51	6-7	36	12	108	9
7	434	1	98	1	116	1	220	1
8	252	6	51	6-7	61	7	140	5
9	231	7	49	8	68	4	114	7
10	130	12	35	11	46	10-11	49	12
11	210	8	46	9	55	8-9	109	8
12	175	11	33	12	55	8-9	87	11

The goals for vocational-technical education selected in the order of their ranked importance overall were as follows:

Rank

Highest Consensus

1. Develop in students pride in work, a sense of accomplishment, and a feeling of self-worth from a task well done.

2. Promote new industry and business throughout the State of Tennessee by providing skilled labor.
3. Promote trade, technical, or business-related employment for all graduates of vocational-technical programs.
4. Develop the occupational awareness and decision-making skills of students at all levels of vocational-technical instruction.
5. Improve the composition of the labor pool throughout the state by providing training opportunities in specified areas of need.
6. Complement the goals of all education in that through employment the quality of life improves.

Medium Consensus

7. Provide the opportunity for persons who are underemployed to experience upward mobility in employment through additional occupational training.
8. Promote student mastery of basic skill development in the areas of reading, communications, and mathematics.
9. Provide vocational-technical education at whatever life stage the occupational training is needed.
10. Enable men and women to gain occupational access in both traditional and nontraditional roles.
11. Develop in students the desire to seek future training as occupational opportunities change.
12. Provide occupational training for special needs populations including the handicapped and the economically disadvantaged.

Other statements included in the questionnaire relative to the goals and objectives of vocational-technical education are listed as follows with the responses given by the respondent groups (SA--Strongly Agree, A--Agree, D--Disagree, SD--Strongly Disagree, A/D--No Consensus).

	ADV/BUS	ADM	INSTR
1. The goal of secondary vocational education across the state is basically to provide occupational information, career decision-making skills and reinforcement.	A	A/D	A
2. The economic downturn and lack of white collar jobs have influenced traditional postsecondary education institutions to offer occupationally specific programs.	A	SA	A
3. A standard affirmative action plan should be developed for all public schools in Tennessee.	A	A	A
4. In areas of low minority enrollment, efforts should be made to attract minority students who could benefit from the training.	SA	SA	A
5. The State Board for Vocational Education should support more strongly career education in grades 1-12.	SA	A	SA

III. THE GOVERNANCE OF VOCATIONAL-TECHNICAL EDUCATION

One of the major objectives of the Tennessee Comprehensive Education Study was to determine how well the present governance structure serves the public education effort. The Subcommittee on Vocational-Technical Education adopted, as part of its research design, the study of governance and the organizational structure in the State of Tennessee. A review of the literature was conducted; original data were gathered through the Vocational-Technical Education Survey; and conferences with instate and out-of-state officials were held.

Studies on Governance

> No other area is more controversial, nor more often debated, nor less understood than the governance issue (Dunham, 1980, 4).

Vocational education and training are legitimate concerns of all levels of government. Since a highly skilled and knowledgeable work force is essential to the economic stability and growth of local communities and the state, all levels of government must be concerned with the condition of the vocational-technical delivery system.

Richard Whinfield described the commonalities concerning vocational education as no accident and attributed federal legislation with the reason. Each state must have a governing board responsible for the operation of vocational-technical education; each must provide services at the high school, post high school, adult, and special needs levels; and each should train students for employment or upgrading in their occupations. Each state adapts these laws to its own needs through the utilization of various delivery systems, i. e., technical institutes, community colleges, area vocational-technical schools, etc. In most states, the chief administrative officer functions as the executive officer to the State Board of Education (SBE) and the administrative head of the State Department of Education. The duties of the position primarily include the enforcement of all board policies and the methods of selection generally include election by the people, appointment by the SBE, or appointment by the governor.

For many years vocational programs grew relatively slowly, and then due to increased federal legislation, the range of vocational education programs was expanded to include postsecondary and adult education. By the early seventies a serious question began to appear: Can a board of education primarily responsible for elementary and secondary education establish effective relationships with institutions primarily charged with serving the needs of business and industry (Whinfield, 1976, 29)? One theory, developing from the idea that different missions require different governance, was closely related to the effect different governance structures had on the priorities of vocational education. For example, one hypothesis was that when one administrative function is subservient to another, less administrative leadership will be given to the subservient responsibility than to the major responsibility. An example given was a board of education that also serves as a board of vocational education. It was reasoned that boards that have vocational education as their sole or major responsibility will be more responsive to the vocational program by permitting and directing more effective vocational education (31).

The position of the state director of vocational education in relation to the SBVE may also have an effect on the output of vocational education in the state. That is, the further removed the state director from the policy-making body the more likely vocational issues will have second and third priority. One study showed that in states where the state director for vocational education reports directly to the SBVE, there is a greater emphasis on adult and postsecondary vocational education than secondary.

Another vocational-technical study, conducted in cooperation with Indiana University, compared governance throughout the states by types. There were four basic types as designated in the study:

1. Type A: States with one agency for all levels of education (six states).
2. Type B: States with an agency for elementary and secondary schools, including vocational education and a state coordinating board and/or governing board for higher education (thirty states).
3. Type C: States with an agency for elementary and secondary schools, an agency for vocational education, and a state coordinating or governing agency for higher education (nine states).
4. Type D: States with an agency for elementary and secondary schools including vocational and technical education and governing boards for individual institutions of higher education with no statewide governing agency (three states).

There are states that do not fit the four basic types. One state (Hawaii) has an SBE and a Board of Regents for universities, which has the responsibility for postsecondary vocational-technical education. Another state (South Carolina) has an SBE for elementary and secondary education which is responsible for vocational education at the secondary and adult level, a Postsecondary and Technical Education Board which is responsible for all other vocational education, and a higher education board (Gentry, 1979, 33).

Gentry pointed out that the clear majority of states has boards that are classified as agencies for elementary and secondary schools, including vocational education, and state coordinating or governing agencies for higher education. The frequency with which this organization is used was based on the early formation of vocational education in this country.

The study also reported that the position of executive officer to the SBVE can be classified in three categories: the state superintendent of public instruction or commissioner of education, who serves as the executive officer of the SBVE in forty states; the state director for vocational education who serves as the executive officer in nine states; and the president of the university system who serves in one state. Gentry felt that one implication resulting from governance structure had to do with priorities and attention. When the person primarily responsible for the operation of K-12 activities chairs the board addressing the administration of all vocational education, ". . . the question of priority and attention to vocational education must at least be considered" (Gentry, 1979, 41).

A comparison of organizational structures revealed that the type of system selected to administer vocational education at the state level has a significant effect on board membership, position of executive officer, selection of the state director, agenda of the meetings, and functions by governance type. For example, states with type B governance (Tennessee) were reported to have high levels of performance (concentration of effort) for secondary and special needs, and high relegation or delegation for postsecondary and adult service areas.

The Education Commission of the States conducted a study on governance concentrating on implications into the 1980s. Over the 1980s governing agencies will have to operate within tight fiscal constraints and personnel limitations. This should be no surprise to anyone, especially educational administrators. It was also felt that educational activities will be more a part of the public record and that all systems will be evaluated more closely. Other projections included:

1. Long-range comprehensive master planning will be replaced by more continuous planning in the form of short-range policy analysis and recommendations about specific issues.
2. It is highly possible that due to gubernatorial pressure and legislative pressure, governing agencies will no longer be able to be an advocate for education but rather critic or evaluator on behalf of the state.

3. There will be a strong tendency for state education agencies to assume more of a role in quality control and evaluation. Because of public demand for accountability and the reality that a number of states continue to make decisions almost entirely through political negotiations, a single governing board is a functional means to carry on these negotiations.

4. The need will be more obvious for a single state agency responsible for program regulation, institutional licensure, planning, policy analysis, and budget review.

5. State agencies should be cautious in complying with affirmative action guidelines. Voluntary efforts should be taken toward recruitment, placement, and retention of minorities in professional and graduate programs at all levels of education (Millard, 1980, 12-13).

Several southeastern states have conducted studies on the governance of vocational-technical education to find a more effective system of management. An effective system is typically described as one that reduces costs, identifies and supports state priorities, reduces duplication, promotes the needs of new and emerging occupations, and ensures high accountability.

One state began studying vocational-technical governance in 1978 and is presently concluding its fourth study on governance. This continuous effort demonstrates the fact that there are several barriers to a change in management systems (Mullins, 1982). Some of the more common barriers to change that were found are:

1. many changes that were not politically acceptable
2. governing boards and institutional administrators suspicious of changes that may result in loss of program support (Smith, 1978, 65)
3. lack of clarity relative to the mission of the various delivery systems (Wall and Scarborough, 1971, 13)
4. lack of support from the legislature and the governor (Georgia General Assembly, 1981, 1)
5. fear of bureaucratic growth and restrictive policies
6. uncertainty of the costs involved
7. lack of grass roots support (Blake, 1982).

Even though there were many barriers to change in governance structures, some states did "bite the bullet" and made changes when it was found that changes were absolutely necessary (Cresap, 1981, III-I; Foster, 1981, 32).

Governance in Tennessee

Vocational education in Tennessee functions primarily under two governance structures: the State Board for Vocational Education (SBVE) which is the primary governing board (the board through which federal funds flow), in that, all secondary vocational and technical education programs, the twenty-six area vocational-technical schools, the four state technical institutes, CETA, and the approval of proprietary vocational schools fall under its auspices; and the State Board of Regents (SBR) which governs the operation of occupationally specific and technical education programs in the ten state community colleges. The SBVE is designated by state law as the sole agency of the state for administering most vocational education programs and projects in cooperation with the federal government and its agencies.

The SBE/SBVE has twelve members serving nine-year terms. The board consists of the Governor, the Commissioner of Education as chairman, and twelve other members, four representing each division of the state appointed by the governor. Each of the two leading political parties is represented by at least three members, and the Executive Director of the Tennessee Higher Education Commission is an ex officio member of the board.

The State Board of Education serves officially as the State Board for Vocational Education and the Board of Examiners of Teachers. Public vocational-technical schools are therefore governed by the State Board which receives its authority from the General Assembly. The first line of administration is the Commissioner of Education followed by the Deputy Commissioner and the Assistant Commissioner for Vocational-Technical Education. All statewide operational affairs for secondary vocational programs, area vocational-technical schools, and the state technical institutes fall under the authority and/or coordination of the Division of Vocational-Technical Education of the State Department of Education. Local school boards and superintendents, assisted by local directors for vocational education, are responsible for the secondary and adult programs for city and county school districts (Tennessee State Board of Education, 1981, 1-2).

The State Board of Education has three main functions. It serves as the regulatory and policy-making body for grades K-12 in the public schools, the special schools, and the state educational television network. Under the title of State Board for Vocational Education, it governs the entire vocational-technical and vocational rehabilitation programs for the state and is the state agency for the administration of veterans training (3).

The duties of the State Board include: the making of regulations for classification and operation of the system for grades K-12, prescribing curricula and approving courses of study adopted by local boards of education, adopting a minimum salary schedule for teachers, exercising complete control over the issuing of certificates, and adopting state plans for federally aided programs. Again, as the SBVE, it sets the policies and regulates vocational education in grades K-12, in the AVTS, and technical institutes (4).

Recently a long-range planning committee was appointed to review the SBE/SBVE's role and to outline the goals for the board by identifying priorities. The committee began its work in July 1981 and by January 1982 had a report prepared for the consideration of the entire board. The committee prefaced its report by indicating that the objectives outlined in it must be refined and adopted by the full board. The full board referred the report to the appropriate standing committees for consideration (Tennessee State Board of Education, 1982, 1).

Concerning vocational education, the following recommendations were made by the long-range planning committee:

First Priority

1. Programs should be developed that integrate secondary vocational education into the total secondary education program.
2. Recognizing increasing responsibility in K-12 programming, the committee recommended that the SBE support a new postsecondary board for governing all AVTS, technical institutes, and community colleges, with the condition that the technical institutes remain free-standing as they have in the past (not merged with other institutions or changed into community colleges). The committee felt that secondary programs should remain under the authority of the SBE (4).
3. The establishment of an accountability system for academic and vocational programs across the state that would result in relating funding to the improvement of educational quality and that would provide incentive grants for systems exceeding established standards (6).
4. The establishment of joint meetings with other state educational boards to improve communications and coordination (7).
5. A study of minimum physical facilities requirements.

Second Priority

1. The Committee questioned whether the State Advisory Committee on Vocational Education had obtained sufficient input from industrial and professional areas of employment in the state and recommended that the size and makeup of the council be changed (The board has no authority over the State Advisory Council for Vocational Education) (8).

One of the agencies in the state of Tennessee which has been most interested in the issue of governance is the Tennessee Higher Education Commission. One of their more recent studies on governance, better known as the Wattenbarger Study, had as its charge to establish guidelines for the coordination of community colleges and technical institutes. The report defined problems of coordination as having six distinct elements: similar missions and programs, close geographical proximity, likelihood of duplicative programming, coordination of program development with THEC, the existence of twenty-eight AVTS, and AVTS converting to associate degree granting institutions (Wattenbarger, 1978, 30, 31). Four alternatives were offered, each admittedly having its advantages and limitations. In summary, the alternatives were as follows:

1. the requirement of regional plans that would include the SBE, SBR, and THEC in the planning mechanism for developing new programs, with the intent of securing mutual consent
2. a transferance of governance of technical institutes to the SBR, which would insure direct and close coordination at the governing board level
3. changing technical institutes into community colleges in urban areas similar to the Chattanooga State Technical Community College
4. creating a third governing board for community colleges, technical institutes, and AVTS, which would take care of all needs of two year institutions (32).

The main conclusion of this study was that coordination cannot be left to chance. It was further recommended that: regional plans be developed, mutual endorsement of new programs be sought after, articulation take place in planning with AVTS, a study of governance of postsecondary education be conducted, and an examination of how the current institutional structure affects students be put into effect (38-39).

The recommendation to merge technical institutes with community college received mixed reviews across the state. Opponents of the merger issue felt that the rationale for the decision of "separate versus being part of" should be based on the quality of the educational program, the economics of the alternative, the acceptance by the product user, and the services provided the student (STIM, 1981, 2).

One group of Tennessee vocational-technical administrators went on record as to their feelings on governance. It was their belief that a single and separate State Board for Vocational Education, responsible for the operation of both secondary and postsecondary vocational-technical education, would be the most effective system of governance for vocational education in this state. This system of governance, in their opinion, would do the following:

1. provide equitable funding to all vocational-technical programs
2. assure improved coordination and articulation at all levels
3. provide a common data base for public or legislative review
4. improve communication on all levels
5. allow long-range planning to be of real value and significance
6. produce cost effectiveness
7. provide a faster response to the needs of business and industry
8. increase utilization of facilities and equipment and better monitoring of inventory, update needs, and costs
9. provide a higher degree of accountability overall whether it be of a financial matter or related to the quality of instruction (Area Vocational-Technical School Superintendents Council, 1982, 1, 2).

Vocational-Technical Survey

The Vocational-Technical Education Survey conducted by the staff had several questions that addressed governance. Respondents were asked to consider each statement and to indicate their feelings as to whether they strongly agreed, agreed, disagreed, or strongly disagreed.

The first statement on governance read:

> The present governance structure of vocational-technical education is the most effective system of governance.

The three major groups responding to this statement were advisory council chairpersons/business, instructional personnel, and administrative personnel.

The advisory council/business group was made up of vocational advisory council chairpersons from county school districts and city school districts; the chairperson of all councils representing each public postsecondary non-baccalaureate institution offering vocational-technical education; and randomly selected employers of 1980-81 school year graduates from technical institutes, community colleges, and area vocational-technical schools. Fifty percent of this group agreed with this statement and 50 percent disagreed, which indicated significant disagreement within the group concerning this statement.

The administrative group was made up of principals of comprehensive high schools and vocational centers, postsecondary presidents (excluding four year institutions), and superintendents of AVTS. Sixty-five percent disagreed with this statement indicating that they believe that another system of governance would be more appropriate. It could also mean that the present governance structure needs to be improved. Thirty-five percent of the administrators felt that the present governance structure is the most effective system.

The instructional group was comprised of randomly selected faculty members representing secondary and postsecondary occupationally specific programs offered in the public school system. Sixty-one percent disagreed with the statement, which suggests that the majority of this group felt as did the majority of the administrators.

The second statement on the survey instrument relative to governance was:

> A new state board for all postsecondary non-baccalaureate education will better serve the employment and educational needs of most Tennesseans.

Responses to this statement by all groups showed only slight agreement among and between groups. The percentages in no way indicated a favored position on the creation of a new board, but at the same time no strong disfavor was shown. Fifty-seven percent of all administrators agreed with this statement; 60 percent of advisory chairpersons agreed; and 54 percent of the instructors agreed. Again, it is noted that 40 percent or more of each group disagreed with this statement or had no opinion.

The third statement closely related to governance was:

> Interinstitutional cooperation, such as the Umbrella Plan, should be expanded to included community colleges.

There was mixed response to this statement within and among all groups. Fifty-six percent of administrators agreed, 60 percent of advisory/business agreed, and 59 percent of instructors agreed.

The fourth statement was "Secondary institutions and postsecondary institutions offering vocational-technical education coordinate programs." Business/advisory group respondents agreed that coordination was taking place, but there was significant disagreement or no consensus on this statement among the administrative group. The instructional group flatly disagreed with this statement. Other statements and responses by group were as follows (A--Agree, D--Disagree, A/D--No Concensus):

	ADV/BUS	ADM	INST
1. Vocational-technical programs in technical institutes and in community colleges are similar.	A/D	A/D	A/D
2. Community colleges and technical institutes basically have similar goals and similar types of students.	D	A/D	A/D
3. There is very little duplication between all program offerings in technical institute and community colleges.	D	D	A/D

The investigation of the governance structure of educational systems has proven to be a highly volatile and politically-oriented issue for many states. Based on historical data and the political realities of this state, the issue of governance in Tennessee can become equally controversial. One thing found during the investigation and research on education was that, no matter what the problem or issue at hand, the personality and integrity of the leaders of the state will be the determining factor in effecting any necessary changes. The following questions were considered by the Task Force.

1. Is the present system of governance the most effective system?
2. Are there improvements needed in the current system that could insure a more effective, high quality, and accountable delivery system?
3. What are the political realities involved in making changes?
4. What would be the costs involved in any restructuring or reorganization?
5. How would a change in vocational-technical governance affect the governance structure of K-12 and higher education?
6. What would be the long-term benefits or limitations of a change in governance?
7. What effect would a change have on the students involved in vocational-technical training, the types of programs offered, and the consumers utilizing the vocational-technically trained human resources in this state?

IV. QUALITY IN VOCATIONAL-TECHNICAL PROGRAMS

Quality has been described as that aspect of the educational program that contains three factors: effectiveness, efficiency, and relevance. A quality vocational program, therefore, enables the student to perform satisfactorily on the job; makes the best use of student time, instructional time, materials, and equipment; and provides the knowledge and skills that are critical to job success and job practices (Franchak and Smith, 1981, 5). One of the most important aspects of quality concerns the desired outcomes of the educational program and the expectations of those persons who avail themselves of the training. That is, quality is dependent upon a specific population's expectations and the development of a program to analyze these expectations with reference to processes, criteria, and program outcomes (Doty, 1979, 21).

These processes, outcomes, and criteria have been the subject of study by countless research teams organized by teacher education institutions, professional organizations, state boards of education, business and industry representatives, federal and state legislative groups, and many other groups. The areas identified in most study efforts concerning quality indicators usually include the broad categories of personnel, program identification and selection, student attainment, and evaluation/accreditation. For this reason, this research effort was primarily aimed at the these four major quality indicators.

The most recent study of quality in vocational-technical programs in Tennessee identified six specific elements (not listed in order of importance) impacting the development and maintenance of quality: advisory committee membership and level of participation, adequacy of facilities and equipment, course content and curricular materials, qualifications of faculty members, guidance and counseling services, and evaluations (Collaborative Workshop, 1981, 3). Subsequent research proved these findings to be accurate.

Quality, although more heavily stressed during times of economic and fiscal constraint, has been stressed in the language of federal legislation for some time. For example, the 1976 Amendments called for: systematic evaluations of all programs listed in state plans for which federal funds were used, labor market oriented planning, improved occupational information systems, and tightened requirements for data accountability. These steps were taken in order to improve the quality of the vocational program. Other requirements for quality as specified through federal legislation were the types of evaluations that each program must undergo, including the measurement and monitoring of placement and completion rates, follow-up, equipment replacement, teacher-pupil ratio, and staff recruitment and development (David, 1981, iv-1, iv-4).

On the state level, research indicated that quality control systems should include carefully controlled authorization and licensure procedures, evaluation based on quantitative and qualitative criteria, institutional mission coordination with statewide planning, and periodic evaluation of the effectiveness of the governing agency (Millard, 1980, xiii).

While the review of the literature yielded several findings on quality, the methods by which these conclusions were made were not without their limitations. Several problems were encountered in determining criteria for quality. Most of these problems can be avoided by:

1. establishing standard definitions
2. separating the instructional process from educational product
3. avoiding political implications or self-motivated autonomy
4. going beyond the minimum standards set by legal compliance
5. securing broad-based input
6. willingness to conduct research and try new methods (Doty, 24).

Quality Indicators for Vocational-Technical Programs

Respondents participating in the statewide Vocational-Technical Education Survey were asked to respond to eight items generally perceived as factors indicating quality in institutions offering vocational-technical education.

The items were ranked according to intensity of consensus and intensity of mode. The following are the rankings given each statement:

Rank

1. program offerings that meet student and business needs
2. the increase of student knowledge and skills in a chosen occupational field
3. provision for up-to-date facilities and equipment
4. percentage of students employed in their field after training
5. educational and on-the-job background of instructors
6. sufficient graduates of training programs to satisfy manpower needs
7. provision for continued staff professional growth
8. evaluation process of programs, faculty, and administrators.

Respondents were also asked to indicate their opinion on a Likert-scale response to the following statements. Opposite the statements is the manner in which the various groups responded to the statements, all of which have to do with institutional quality (SA--Strongly Agree, A--Agree, D--Disagree, SD--Strongly Disagree).

	ADVISORY/ BUSINESS	ADMINISTRATOR	INSTRUCTOR
1. One vocational-technical institutional objective is to utilize the input of advisory committees.	SA	SA	SA
2. Input from advisory committees has an effect on institutional planning and decision making.	A	A	A
3. State priorities and policy changes are disseminated by the institutional administration in order to maintain a well-informed faculty.	A	SA	A

4. The Vocational Education Data System has made important contributions to institutional and statewide planning.	SA	A	A
5. The institutional administration encourages input from all appropriate instructional personnel on decisions concerning curriculum and program change.	A	SA	A

The quality of vocational-technical instruction was most often described as the key to vocational education institutions meeting their objectives. Studies have shown that many teachers had to acquire skills that teacher educators, inservice program planners, and administrators did not provide (Smoak, 1981, 63). A need has been evidenced for realistic preservice and inservice certification requirements, goals for professional development that exceed the minimum standards, and incentives for technological updates in most areas of vocational-technical institutions. There has, also, been developing in this state, and others, the establishment of sounder procedures for insuring that those persons in instructional positions have attained the desired level of competence in their respective occupations (Haskell, 1981, 4-5).

Some states feel very strongly about the quality of their vocational-technical programs and have developed system-wide exchange programs with business and industry. These programs: (1) provide update experiences for vocational educators, (2) provide practical insight for the revision of instructional programs and/or administrative duties and responsibilities, (3) increase business and industry involvement in vocational-technical education, and (4) provide the opportunity for business, as well as education, to have input into the decisions which can improve the quality of training people for jobs (McElroy, 1981, d-1).

Instructional Quality Indicators--Survey

Respondents were asked to indicate their opinions of seven items on a scale of 1-8 with 1 representing highest importance and 8 representing low importance. They were also asked to indicate the three factors that they believed to best indicate instructional quality in vocational-technical education programs. The following are those items and their rankings:

1. institutional recruitment and encouragement of capable instructors
2. student placement following graduation or completion of program
3. course outline and requirements
4. student-instructor ratio per class
5. student performance on testing instruments
6. student follow-up after placement
7. grade point average by discipline.

Student Attainment

The study of student attainment must consider the employment (placement) and the employability (competencies) of the vocational-technical student participant (David, 1981, iv-9). The overall effects of participating in vocational-technical education has undergone close examination. The literature generally describes attainment in terms of: enrollment and completion in vocational-technical education, socioeconomic status of students, student placement and earnings, citizenship, job relatedness to educational program, self-assessment of ability, attitude toward education and employment, performance on the job, job satisfaction, length of job search, and continuing education (Simison, 1981, 11).

When measuring the impact of vocational education on students, it is important to realize the different reasons why students enroll in programs. Typical reasons are career exploration and proficiency in a skill area (Golladay and Wulfsberry, 1981, 212). Research indicated that variables which affect program selection are family backgrounds, economic and noneconomic experiences, cognitive ability, geographic location, quality of the schools, labor market conditions, and counseling (David, 1981, vii-2). Educators realize that high numbers of students enrolled in a particular program do not necessarily mean all students in the program have similar employment goals. Factors such as relaxed academic standards, the declining market value of some degrees, and even pressure from parents could affect enrollments (Doty, 1979, 6).

Another issue concerning student attainment is access. Although federal and state laws prohibit discrimination in public educational programs, research indicated that some forms of segregation are still taking place. Some administrators and counselors, for example, have made attempts to keep some students out of occupational programs that interested them because "they thought the students were capable of more" (Weinrich, 1974, 179). Also related to access is the open-door admission policy adopted by most delivery systems of vocational education. Everyone should be allowed the opportunity to gain competencies necessary to support himself or herself. Furthermore, it is not very sensible to deny vocational or technical training to a public faced with double digit unemployment rates.

Since the open door admission policy is generally enforced, postsecondary institutions accept many students with basic skill deficiencies. It is easy to criticize the quality of general education at that point but that is of no benefit to the student. If remedial education is necessary on the postsecondary level and if it must take place in vocational-technical institutions, provisions should be made for this type of instruction (Weinrich, 1974, 38).

What happens to the student after having participated in vocational-technical programs? National studies indicated that 45 percent of both secondary vocational education graduates and the general curriculum graduates pursued non-baccalaureate postsecondary education within four years after graduation. Approximately one-half of these obtained either a one-year certificate or license, or a two-year degree within four years after graduation. High school graduates who continued their education in postsecondary less than baccalaureate education did better on a variety of measures of gainful employment than those students who did not continue their education (David, 1981, xi).

Studies have also shown that students who changed from the general curriculum to a vocational curriculum often experienced greater satisfaction with school. On the other hand the research indicated that students in high school occupational programs had relatively low aspirations (Grosso and Shea, 1979, 44). The feeling or attitudes about job satisfaction, progress at work and feelings of satisfaction concerning prior education were also described in national longitudinal studies. Vocational graduates "liked their jobs" more than general or academic graduates. When asked about their chances of realizing their aspirations, blacks were more pessimistic than were whites, and black youths from occupational programs were especially so (Grosso and Shea, 1979, 115).

A study showed that race, sex, and socioeconomic background had had an effect on student attainment. Eighty-five percent of all female students have had some experience in vocational education in grades 9-12. Seventy-one percent of all male students had had some vocational course work. By race the percentages of participants in vocational-technical education in grades 9-12 were 81 percent--hispanic, 79 percent--black, and 78 percent--white (Campbell, 1981, 82).

There were substantial differences in participation percentages associated with different socioeconomic status (SES). Eighty-one percent of high SES had no vocational experiences in high school or had only one course. In contrast, 43 percent of the low SES students had no vocational education experience (Campbell, 83).

Another concern relative to student attainment previously mentioned was basic skill deficiencies. Several study groups have determined that there is a general need for more math and science for all high school students (Kirst, 1981, 19). A report from the National Center for Education Statistics showed that vocational students enrolled in significantly fewer math and science courses than did students in the academic majors. They also took fewer math and science courses than students classified as "general." An example given was that 35 percent of all vocational students took two years of science in high school as compared to 44 percent of the general students and 74 percent of the academic students (Peng, 1980, 5).

Completion rates were consistently mentioned in the literature as a way to measure the success of vocational-technical programs. One study's interest was in determining to what extent the student completing a program had obtained marketable and reasonably proficient skills. However, one must remember that completion rates do not account for some students who may have benefited from their participation in vocational education. Some students, the numbers of which are debatable, terminate a program after achieving enough skills to hold a specific job or upgrade themselves in specific skills.

Unless one is careful, using completion rates can cause misleading or faulty conclusions (Golladay and Wulfsberry, 1981, 213).

The findings from many studies revealed that good indicators of quality were available in student placement records. However, one author reported that:

> While placement was frequently pointed to as the most important indicator of success, it is the least reliable statistic reported by the state (Whinfield, 1976, 76).

This supposition indicates that a problem can be encountered with using placement data as an independent indicator of quality. Several factors must be considered in measuring quality by placement rates. For example, students may be able to enjoy higher wages by moving out of their field of training. Other factors include fluctuating labor markets, ineffective record keeping, and personal values, needs, and expectations.

The counseling students receive in school has an effect on some areas of student attainment (Simison, 1981, 4). Many full-time counselors, although well versed in methods and the procedures by which to help students advance to college, may not be well versed in vocational-technical curriculum or employment opportunities in specialized fields. Studies have shown that good vocational counseling has a direct relationship to high placement rates, good employer ratings, and getting along with others on the job (Education for Employment, 1979, 16).

Response to Student Attainment Statements on the Vocational-Technical Survey

SA--Strongly Agree, A--Agree, D--Disagree, SD--Strongly Disagree, A/D--No Consensus

Recruitment	BUS/ADV	ADM	INSTR
1. More effort should be placed on recruiting the top 10 percent of high school graduates to participate in postsecondary vocational-technical programs.	D	A/D	A
2. In areas of low minority enrollment, efforts should be made to attract minority students who could benefit from the training.	SA	SA	A
3. Evening courses and weekend courses should be increased in order to accommodate full-time workers.	SA	A	A
4. Secondary vocational education has helped reduce the high school dropout rate.	SA	SA	SA

Special Needs	BUS/ADV	ADM	INSTR
1. Priorities for special needs students are understood by the faculty and provisions have been made to accommodate them.	A	SA	SA

Placement	BUS/ADV	ADM	INSTR
1. Vocational-technical placement personnel are actively pursuing new business, industry, and government contacts.	A	A	A

	ADV/BUS	ADM	INSTR
2. Employers of graduates from postsecondary vocational-technical programs believe that the training provided the graduates makes them more employable.	SA	SA	SA
3. Employers of graduates from secondary vocational programs believe that the training provided them makes them more employable.	A	A	A
4. In general, community colleges effectively place graduating students in the job market.	A	A/D	A
5. In general, technical institutes effectively place graduating students in the job market.	A	SA	SA
6. Job placement in the field in which a student was trained is the ultimate indication of quality in vocational-technical programs.	SA	A	A
7. In your institutions students are commonly placed in fields for which they are being trained before they complete the program.	A/D	A	A
Training			
1. Local business and industry employers are satisfied with the kinds of skills vocational-technical graduates bring to the job.	A	A	A
2. Graduates from vocational-technical programs believe that they have been prepared for entry level performance in their area of training.	A	SA	SA
3. Students should participate in an orientation session prior to beginning class work.	SA	SA	SA
4. Students enrolling in vocational-technical programs should be given pretests and post tests in order to measure competencies gained.	SA	SA	SA
5. Each student should be made aware of the skills and competencies he/she should possess at the end of training.	SA	SA	SA
6. Students at my institution rarely change from one degree or certificate program to another.	A	A/D	A/D

Personnel

> The unique problems of vocational and technical education programs require competencies not required in the development and management of general education or academic programs (Wenrich, 1974, 145).

The demand for qualified vocational-technical personnel is increasing as the public is becoming more and more aware of the need for specific career preparation. Major concerns relative to personnel have been the recruitment and selection of instructors, the determination of exact skill level, certification, salaries, and staff development (Wenrich, 214). Problems identified in the course of study deliberations included:

1. having to compete, usually unsuccessfully, with industry for qualified technicians
2. salary schedules far below what instructors could be paid in the private sector (Lawrence, 1982, 2)
3. occupational experience and success as a vocational teacher not necessarily correlated (Haskell, 1981, 28)
4. competency testing for vocational teachers not widely utilized and certification seldom dependent upon performance evaluation (Pipho, 1982)
5. personnel not being exposed to "state of the art" procedures and practices being utilized in business and industry (ATEA, 1980, 8)
6. counselors and administrators receiving little to no training in labor market data collection, analysis, and dissemination (National Evaluation Systems, 1981)
7. many teacher education institutions lacking clear-cut goals, objectives, and organizations relative to vocational-technical graduate and undergraduate programs (Shoemaker, 1978, 5).

Many researchers have made predictions or projections about the direction professional development activities should take. Most feel that new dimensions in training must be developed. Others feel that teacher educators should be increasingly exposed to new and changing technology. There has also been an advocacy for increased emphasis on support services such as basic skills instruction, competency based and occupationally-sequenced instructional methods, and training in modern style management practices (Hopkins, 1982, 1-2).

Responses to Personnel Statements on the Vocational-Technical Survey

SA--Strongly Agree, A--Agree, D--Disagree, SD--Strongly Disagree, A/D--No Consensus

Qualifications	ADV/BUS	ADM	INSTR
1. Salaries for vocational-technical instructors are commensurate with experience and educational background.	A	D	D
2. Flexibility concerning vocational-technical instructor qualifications is necessary for competing with industry for qualified personnel.	A	SA	SA
3. Guidance counselors in your institution have sufficient vocational, technical, or business related backgrounds necessary to advise and counsel students.	A/D	A	A/D
4. Community colleges should have placement personnel with strong industrial/business related backgrounds.	SA	SA	SA
5. The faculty teaching vocational-technical courses in community colleges have strong occupational experience in the fields in which they are teaching.	A	A	A

6. Technical institutes have placement personnel with strong industrial/business related backgrounds.	A	SA	SA
7. A standard affirmative action plan should be developed for all public schools in Tennessee.	A	A	A

Staff Development

	ADV/BUS	ADM	INSTR
1. Industrial leave is advertised and supported by the institutional administration.	A	D	D
2. Faculty members in your institution are encouraged to participate in regional accreditation activities.	SA	SA	SA
3. Inservice training or faculty and staff development activities are conducted on an ongoing basis.	A	SA	SA
4. New instructors, part-time as well as full-time, should participate in a comprehensive orientation before classroom duties are assigned.	SA	SA	SA
5. Faculty and staff development functions include activities that foster professional growth for staff members.	A	SA	A
6. Institutional administrators provide the example and leadership in maintaining a climate that is conducive to productivity and learning.	SA	SA	SA
7. Institutional administrators are interested in the professional development of the industrial instructor.	A	SA	A
8. In general, vocational-technical teacher training provided by state institutions of higher education produces teachers who perform well.	A	A	SA
9. Failure of curriculum planners to agree on and understand the sequence of skills in job training activities that should be offered is a problem.	A	A	A

Program Identification and Selection Process

One of the most crucial aspects of quality in the vocational-technical education program is the assurance that curricula are updated and reflect the trends in the current and future job markets (National Evaluation Systems, 1982, 66). The most recent studies relative to the vocational-technical curriculum have included the following issues:

1. the pros and cons of specialized education vs. general education
2. the confusion of practical or industrial arts with vocational and technical education
3. the specific objectives of the vocational curriculum
4. new technology effects on program planning
5. sociological effects on program planning (automation, mobility, retirement age, changing status of women, etc.).

Numerous factors affect the curriculum such as: administrative policies, philosophy or mission of the institution, teacher competence, school equipment and facilities; instructional materials, personnel policies, federal, state and local laws, community culture and environment, socioeconomic trends, and public opinion (Teske, 1969, 12).

The most popular and most discussed topics in the field of vocational-technical education are the occupations being created by new technology. These occupations usually involve: fewer manual skills and more cognizant understanding, skills of a higher order or more technical knowledge, a more complete functional general education (math and science) than the jobs they replace, and workers who need more maturity to fill the jobs successfully (Calhoun and Finch, 1976, 13).

New and emerging technologies have to be acted upon before the need becomes crucial. "New program development is the lifeblood of vocational-technical education" (Wenrich, 163). As technology increases and the composition of the labor force changes, manpower demands are altered. The curriculum development process should be clear-cut and detailed so that concerned employers, consumers, legislators, and advisory councils can market and effectively utilize the vocational-technical offerings. This process should include:

1. review of manpower needs and job availability
2. analyses of required institutional space and equipment
3. review of the availability of qualified potential faculty
4. a cost benefit analysis utilizing previous data as compared with existing programs (Wenrich, 167).
5. A data system that can:
    a. identify and anticipate job vacancies
    b. specify where the jobs will be
    c. specify when they will be available
    d. identify specific job skills needed
    e. identify the numbers needed to fill the demand
    f. calculate the net balance between supply and demand
    g. make information easily accessible to policymakers, administrators, and teachers (Choate, 1982, 25).

Fiscal restraints and inflationary times make it necessary, especially when many institutions must operate under enrollment controls, to eliminate some programs in order to accommodate the needs of new and emerging occupations. Nonproductive programs should be discontinued whether or not there are fiscal constraints. If a program evaluation indicates that there are no jobs in a particular field, that lesser trained people can adequately perform the job, that costs are skyrocketing without sufficient benefit to the institution or the community, or that other institutions can do a better job, the program should be terminated (Wenrich, 179).

Procedures in Tennessee

Comments made by a local director of vocational education for a city/county school system during a public hearing pointed out the uniqueness of each vocational program based on customs, economic and business climate, and geographic location of the institutions. Also emphasized in the presentation was the fact that a blanket proposal for identifying and selecting programs in vocational education would be inadequate for effective and cost efficient programming.

The methods described for identification of local programs on the secondary level were surveys soliciting information on: existing and projected employment demand, number of jobs needed, and skills needed. A follow-up was then conducted for verification and the information gathered was utilized in curriculum and program planning. The Advisory Council was described as being very helpful in providing "informal" information related to program identification and selection (Sellers, 1982, 1-3).

Postsecondary

The procedure for identifying and selecting programs in area vocational-technical schools follows a very practical pattern. The program identification process includes: (1) an annual review of existing programs, (2) a review of demands and requests for programs, and (3) a review of employment outlook and demands. The selection process includes presenting the plan to an area coordinating committee for articulation and then submission to the AVTS central office within the Division of Vocational-Technical Education. The formal proposal to the Division must include: rationale, substantiating data, physical plan, curriculum, equipment and supplies, personnel, funding, and the formation of a craft advisory committee. Problems listed with the process were:

1. Lack of good criteria for evaluation allows weak programs to remain in operation.
2. Budgeting was based on automatic continuation of existing programs rather than solid justification for continuation.
3. Some AVTS were maintained with consistently low enrollment (150 students or less).

Recommendations for AVTS were made by one area school director. Some of the recommendations included the establishment of yearly operational plans, the establishment of goals and objectives for the funding and implementation of these operational plans, increased cooperation with central office and state staff, and developing a thorough follow-up system on graduates as a means of updating and revising the curriculum (Treece, 1982, 1-4).

The technical institute identification and selection process was described in two different ways. The first method involved the identification of special courses. This information can come from a number of sources including professional organizations, advisory councils, students, industrial personnel, etc.

If, as is the case in many of the courses offered, the individual business, industry, or governmental agency is contracting with the institute to deliver the training, an agreement on funds for special programs must be approved prior to the course beginning. The Executive Officer of the State Board for Vocational Education approves this agreement after the president of the technical institute and the appropriate representative from business, industry, or government have agreed to it.

The other process deals with ongoing programs. When a request or need for a new program first arises, an ad hoc advisory committee is established to conduct a needs assessment study to validate need. If projected student enrollment would be sufficient to justify the program, major instructional objectives are established. A permanent technology advisory committee is then appointed to assist in the design of a detailed program proposal.

Once State Board approval has been obtained, one approval yet remains--that of the Tennessee Higher Education Commission. The statutory responsibilities of the Tennessee Higher Education Commission include the charge "to study the need for particular programs" in "the various institutions of higher learning" (T.C.A. 49-4203). Furthermore, the scope of the Tennessee Higher Education Commission's studies and recommendations has been defined to "encompass the programs of . . . the state's technical institutes" (T.C.A. 49-4204). Thus, new academic degree programs, new off-campus programs, and new certificate of credit programs requiring 36 quarter hours and published in the institute's catalog as offered on a recurring basis, all require approval of the Tennessee Higher Education Commission.

Problems with the process as described by the dean of one technical institute include:

1. The Tennessee Higher Education Commission has chosen to review program proposals at only selected meetings causing a long lead time to be necessary from conception of the idea to implementation of the new program.

2. Another major concern is adequate funding. High technology and emerging occupations require expensive equipment and highly trained state of the art instructors (McNutt, 1982, 1-3).

The community colleges have a program identification process very similar to the processes utilized by the AVTS and technical institutes. New program idea sources are continuously monitored, a feasibility study is conducted, and a proposal is written. The approval process includes institutional, Board of Regents, and Higher Education Commission approval. In addition, employer, graduate, and nonreturning student follow-up are conducted after the program has been in operation for evaluative purposes and to identify the need for program redirection.

Concerns of the community college deans with the identification and program approval process were:

1. delay in meeting employer needs caused by the approval process and funding
2. misuse of advisory committees which could include members' self interest in the supply/demand factor
3. validity of employment needs surveys (unreliable or nonapplicable data)
4. inadequacy of student interest surveys

The alternatives to delays in meeting employer needs given were non-credit training (which needs only institutional approval) and contract instruction (Moore, 1982, 1-2). It is interesting to note that all postsecondary programs either officially or unofficially coordinate program offerings either through institutional articulation plans, area coordinating councils, the Umbrella Plan, or through professional organizations.

Accreditation

Accreditation is defined as "the process by which an agency or organization evaluates and recognizes a program of study or an institution as meeting certain predetermined qualifications or standards" (Selden, 1976, 12). Accreditation has also been defined as "the recognition given to an institution or program that meets the standards or criteria established by a competent agency or association" (Blauch, 1959, 8). While definitions of accreditation may vary somewhat, a common objective is achieving and maintaining quality.

The effects of accreditation on educational institutions are varied. Many parents and students believe that accrediting agency standards indicate quality, and parents feel that their children gain a competitive edge when enrolled in highly accredited schools (Orlans, 1975, 10). Accreditation also provides a subtle form of publicity that makes accredited institutions and programs better known than unaccredited ones.

Accreditation encourages institutions to evaluate their programs in terms of the goals and purposes the institutions set for themselves. The guidelines set for accreditation activities such as self-evaluation, site visits, and written reports endeavor to give institutions an outline which hopefully helps to enhance quality (Carnegie, 1978, 52). The agency exerts an external judgment on the institutions' resources and performance. The decisions made can affect: institutional eligibility for federal funding and financial aid to students, approval for individual membership in professional organizations, acceptance of students into some schools, approval of selected Civil Service jobs, grants from major research foundations, and procedures for licenses to practice some occupations (Selden, 1960, 4).

Criticisms of Accreditation

The question as to whether accreditation adequately serves as a quality indicator surfaced in the review of the literature. Issues in education such as the decline of the classical curriculum, growth of elective offerings, diversity of secondary and postsecondary institutions, and the large number of institutions that have received accreditation have caused some educators to question the standards used in accreditation (Troutt, 1978, 48). Accrediting agencies have also received criticism for: not presenting fraud and malpractice, not making quality distinctions by allowing too many institutions to gain accreditation, placing too much emphasis on process rather than outcomes, and not studying instruction directly (Petersen, 1979, 34; Orlans, 1975, 191).

The Council on Postsecondary Accreditation (COPA) has the responsibility of coordinating the activities of the regional accreditation association. This national umbrella agency also monitors the standards of the professional agencies. Critics complain that regional associations tolerate COPA only under sufferance and that COPA has very little real authority over the improvement or raising of standards. Another criticism of COPA was that representation on the COPA Board was heavily weighted with the regional association leadership (Ashworth, 1981, 88). One author responded to the criticism by saying that "for all the literature criticizing regional accreditation, hardly any proposals for reform exist" (Troutt, 1978, 31).

Evaluation

Evaluation criteria imposed on institutions by accrediting associations have shaped the curriculum offerings and have significantly influenced the manner in which institutions carry out their functions. While all evaluations conducted at the local level are not for accreditation purposes, they have utilized similar theories and practices.

Evaluation has been defined as "the collection of information and judgments from a wide variety of sources to facilitate planning, to aid in the improvement of programs, and to meet accountability demands" (Norton, 1981, 11). The purposes of evaluation are:

1. to improve programs (Evaluation can help to ensure that instruction is relevant and current and that planning decisions about program improvement are based on the best facts and figures available.)
2. to assist in making and justifying decisions
3. to meet accountability demands
4. to promote or publicize vocational programs
5. to meet state and federal mandates (Millard, 1980, 53).

Successful and efficient evaluation of vocational-technical programs must involve representatives from numerous groups. Broad-based involvement helps to ensure that evaluation results have credibility for various audiences. Evaluations should include instructors, advisory committees, administrators, support personnel, students, community organizations, and the private sector.

Many techniques have been used to obtain evaluative information and to assist in improving programs. These techniques include student and employee follow-up, student interests surveys, evaluation of community resources and needs, student evaluation of instructor, evaluations of facilities and equipment, and cost-outcome analysis (Norton, 1981, 26). There is probably no one best evaluation technique. The best techniques are the ones that best match the needs of the evaluation; they also depend upon the extent of the effort expended, the resources available, and the questions that need to be answered.

One of the major purposes for evaluation is to promote and publicize the educational program. One author reported that this purpose has political implications. It was explained that much of the evaluation product is seldom marketed appropriately. The results and methods used are not widely known, thereby, possibly reducing the overall potential for programs to become an integral part of the economy. Vocational education is described as an area sorely needing "marketing" and an area that should develop better ways of convincing parents that its programs "make sense for their children" (Dunham, 1980, 22).

Several states utilize statewide evaluation systems. Their systems typically are comprised of four basic evaluative functions: program evaluation, process-product evaluation, cost-effectiveness evaluation, and overall evaluation. Some state school boards use the change in per pupil costs as an index of efficiency. If there is a decrease in the number of drop-outs, and there are substantial enrollments in vocational education, the school is deemed to have "good holding power" (Whinfield, 1976, 73).

States use two types of evaluations in their efforts to maintain quality programs: state sponsored evaluations and voluntary or regional accreditation sponsored evaluations. As mentioned earlier, both are based on similar theories but they have slightly different objectives.

States that conduct their own evaluations and at the same time promote private accreditation should strive to see that both processes complement each other. The Maryland Board of Higher Education and the Middle States Commission on Higher Education (a regional accreditation association) recently entered into an agreement to conduct joint evaluations, including site visits. This type of system works well for comparative quality assessment. Since state agencies must consider institutional goals and system-wide goals, they are in an excellent position to make comparative and individual judgments. Statewide agencies were more likely to be concerned with preserving and strengthening quality for the entire system. Institutional and program quality were stressed more by the regional and professional accreditation associations (Millard, 1980, 36).

Evaluations are extremely important in improving the connection between work and education, in maintaining quality, and in meeting federal, state, and local guidelines; however, the literature pointed out criticism concerning the dominant theories and practices used. One study pointed out that the most common criticism of the evaluation of vocational-technical programs concerned job placement and follow-up. Studies conducted also reported that improvements were needed in: the size of survey samples used in studies, the design of follow-up instruments and questionnaires, measurement criteria, background variables, and statistical techniques (National Academy of Sciences, 1976, 14).

Another criticism was that current evaluations offer little assistance to the teacher, curriculum coordinator, or policymaker because the criterion measures do not adequately assess program effectiveness. In addition, evaluations most often measure success in terms of initial job placement (David, 1981, xxviii). Initial job placement can be affected by many factors including the availability of jobs, social status, personality, intellect of the student, and chance. It was suggested that existing criteria should be supplemented with measures of other aspects of program success, such as job satisfaction, job turnover rates, the socioeconomic mix of students, and changes in self-perception (National Academy of Sciences, 1976, 15).

Responses to Evaluation/Accreditation Statements on the Vocational-Technical Education Survey

SA--Strongly Agree, A--Agree, D--Disagree, SD--Strongly Disagree, A/D--No Consensus

	ADV/BUS	ADM	INSTR
1. Facilities and equipment of vocational-technical institutions are constantly under evaluation by the administration and potential employers of graduates.	A	SA	A
2. Administrators are evaluated regularly by the central office or governing board.	A	SA	A
3. Textbooks and instructional materials are evaluated yearly in order to maintain occupational or educational relevance.	SA	A	A
4. Present evaluation procedures and self-study criteria are helping to insure and maintain quality.	A	SA	SA

V. FUNDING DISTRIBUTION

The generation and distribution of funding for public education has been an important issue for the Tennessee General Assembly, the Governor, and the people of Tennessee since the state set out to provide education for its citizenry. The economic and financial condition of the country and the state at present makes the adequate funding of education an even more critical issue. The amount of real dollars being spent for education has not increased over the years due to rising costs and inflation. In other words, we are spending much more money for education in the state but our dollars are buying much less than they did five or ten years ago. Furthermore, long-range socioeconomic predictions indicate a decline in the number of parents, a decline in the growth of public revenues, and increasing competition for the educational dollar (Kirst, 1981, 51).

The major questions asked across the state relative to the funding of vocational education include: How is the money earmarked for vocational education being spent? How much more does vocational education cost as compared to general education? Taking into consideration rising inflation and high equipment and maintenance costs, combined with declining federal dollars, how are we going to pay for vocational education in this state? Sound research methodology was applied to study these questions by examining present procedures and the rationale by which federal, state, and local funds are distributed.

Landmark federal legislation affecting vocational education includes the Morrill Land-Grant Acts, Smith Hughes Act, George-Barden Act, Vocational Education Act of 1963, Vocational Education Amendments of 1968, Education Amendments of 1972, Comprehensive Employment and Training Act of 1973, Educational Amendments of 1974, Educational Amendments of 1976, and subsequent amendments. Each of these acts has infused increasingly larger sums of money into vocational education programs.

The 1976 Educational Amendments expanded the purposes of federal support by placing more emphasis on and provided funding for reducing sex bias and stereotyping in occupational programs. It also reiterated the fundamental goal of increasing the schooling options available to youth and adults (Grosso and Shea, 1979, 3). Legislation currently before Congress deals more specifically with job training. New vocational legislation being introduced includes House Resolution No. 5320, which is the Job Training Partnership Act, and Senate Bill No. 2066, the Training for Jobs Act (Bottoms, 1982, Vol. III, No. 21).

The federal financial support of vocational education is made available to State Boards for Vocational Education under provisions of the Vocational Education Act, as amended in 1976. The five sections mandating funding are:

Section 105.	State and local advisory councils, $75,000--$200,000
Section 120.	Basic grants, co-op, work study, administration, facilities, or buildings
Section 130.	Program improvements, supportive services, (curriculum development, research, inservice, guidance, sex bias)
Section 140.	Special programs for the disadvantaged (youth unemployment, school dropouts)
Section 150.	Consumer and Homemaking Education (designed to assist consumers and to improve the home and the quality of family life).

In 1978-79, Tennessee received a total of $116,142,800 in federal and state funds for Vocational Education.

Section 105	$ 109,080
Section 120	92,004,615
Section 130	4,933,689
Section 140	463,908
Section 150	18,631,688

(Golladay and Wulfsberry, 1981, 129-133).

The effect of federal funding has been studied extensively. One representative study conducted by the National Institute of Education yielded several sound conclusions on the effect of the 1976 Vocational Education Act amendments. Based on these conclusions the following recommendations were made:

1. Assuming that the primary goal of federal policy is to equalize the capacity of local school districts to provide vocational education programs, federal funds should be directed to districts of low financial ability by a method that is explicit, recipient specific, and systematic.
2. Special needs students should be given more weight in a formula than others in order to promote their participation.
3. In improving and extending programs, the distribution of federal funds should be done on the basis of proposals which describe how the funds are to be spent and why.
4. For special needs, federal funds should be distributed within the state to applicants on the basis of proposals which describe how the funds are to be spent and how many students are to be enrolled in vocational programs (David, 1981, XLIV).

Requirements for the Receipt of Federal Funds

States were instructed in Section 106-5-A of the 1976 Amendments to give priority to applications for federal funds from economically depressed areas and for programs designed to meet new and emerging manpower needs. The two most important factors for local education agencies (LEAs) should be: (1) their relative ability to pay for vocational education in their area and (2) the relative number or concentration of low income families or individuals within the area. Also to be considered is the number or concentration of students whose education imposes higher than average costs, such as handicapped students, low income families, etc. Two other requirements in the 1976 Amendments referred to the use of federal dollars in conjunction with state and local dollars. The "maintenance of effort" requirement was designed to keep the level of state and local funds as high as possible. The second requirement was that federal funds should be used as a supplement to local and state funds and that they should "in no way supplant state and local dollars" (David, 1981, I-12). A federal set-aside also specifically mandated a minimum expenditure of total federal funds of 10 percent for disadvantaged and limited English-speaking persons, 10 percent for the handicapped, and 15 percent for postsecondary and adult programs.

Over one-half of all federal funds spent in all states are spent on secondary vocational-technical education. Occupationally specific enrollment, as reported through the Vocational Education Data System (VEDS) in 1979, showed enrollment in "programs concentrating on a given field in sufficient depth to be deemed preparation for employment in that field" at 29.5 percent for secondary, 91 percent for postsecondary, adult long-term at 87.5 percent, and adult short-term at 51.0 percent. Postsecondary programs were more expensive to operate but the sheer number of secondary programs far outweighed the money spent on postsecondary programs (David, 1981, III-41).

Many states had schools offering post-twelfth grade vocational-technical programs that worked in direct competition with community colleges and vice-versa; sometimes they operated across the street from each other. The four-year institutions developing occupational education programs with state funds were in competition with both. In addition, proprietary institutions provided a wide range of effective vocational programs without state support and frequently without support of local agencies (Millard, 1980, 81-82). Tennessee does have four-year institutions that offer one-and two-year vocational programs; and the conditions described above are not uncommon in Tennessee. These same circumstances have been the force behind studies of allegedly duplicative programs, unhealthy competition for state and federal funds, and have caused many legislators and taxpayers to look at the funding process.

The proper and adequate funding of vocational-technical programs also has a direct effect on economic and community development. Business and industry representatives feel that the average number of persons in the state that participate in some form of vocational education is an indication of the state's ability to improve the business and manufacturing climate in that state. In 1981, Tennessee ranked twelfth in the nation for states bringing in new industry because of its sunbelt location and because of the tax base, welfare expenditures, average unemployment compensation benefits paid per covered worker per year, average manufacturing wage, and increased governmental emphasis.

In 1981, Tennessee ranked in the last five states nationally for the average number of high school educated adults. Tennessee also ranked 27th nationally for vocational education enrollment as a percentage of the state population and 28th in state and local government general expenditure growth over three years, versus state and local government general revenue growth over three years. Florida, on the other hand, ranked number one for providing a positive business and manufacturing climate, and number one in state and federal appropriations for vocational education in the southeastern area. These are significant figures in that they show how important it is for Tennessee to maintain a strong, flexible, and competitive vocational-technical delivery system (Alexander and Grant, 1981, 61, 73, 81).

Funding of Vocational Education in Tennessee

The major support for vocational education from the state level is provided through the Tennessee Foundation Program (TFP) enacted into law by the General Assembly in 1977. In the TFP there are eight (8) specific areas of instruction that are funded. These areas are assigned a specific cost differential which represents the ratio or funding difference between that area and the base funding of grades 5-6. Thus, a funding differential of 2.1 represents funding at 2.1 times greater than the funding for grades 5-6. In 1981-82, the cost differentials for vocational education were funded at .88 percent because of reduced funding in accordance with available revenue.

Tennessee Foundation funds are provided on a student weighted full-time equivalent/average daily attendance (WFTEADA) basis. A program attendance survey of students served by each local education agency (LEA) is made for each of the first three months. The average of the LEAs full-time equivalent, average daily attendance for each program in the highest two of the three attendance surveys (months) is used to compute the total vocational funds for the entire school year.

The Department of Education in conjunction with Finance and Administration determines the funds required in accordance with projected student enrollments. This information is considered when the Governor's budget is prepared for presentation to the General Assembly. The General Assembly may adopt the funding needs as presented or may add or subtract funds from particular categories of the foundation program funding. The total amount of dollars available for formula funding is determined by the final budget figure adopted by the General Assembly.

During the annual budget preparation, the estimates for the vocational full-time equivalent, average daily attendance for the next school year are calculated for each service area. The total WFTEADA is then computed by the Tennessee Foundation formula with any expected increase in the base and T & E (Training and Education) factor. The result is the budgeted dollar amount projected for the next school year. In addition, a limited amount of state funds are provided through Code 45, Object 13 (grants to LEAs) for the purpose of providing matching funds for the handicapped and disadvantaged along with program funds for adult (both preparatory and supplementary) and adult health (LPN) (Division of Vocational-Technical Education, 1982). In 1981-82, the total TFP funds amounted to $555,264,638 prior to subtracting an aggregate local required contribution of $52,067,372.

In 1973, the Tennessee General Assembly provided for comprehensive vocational and technical education in grades 9 through 12. The legislation stated:

> It is further declared to be the intent of the general assembly of the State of Tennessee that comprehensive vocational and technical education be made available by the state and local education agencies in grades nine (9) through twelve (12) (T.C.A. 49-2709).

In 1980-81, the local school systems in Tennessee expended a total of $79,452,257 in direct costs for vocational education at the secondary level.

Federal Funds for Secondary Vocational Programs

A portion of the federal funds received under the provisions of Public Law 94-482 are used to support the cost of regular vocational programs. A formula approved by the U.S. Department of Education must be used to distribute these funds. A number of factors are considered in the formula. Each of these is described below:

a) Relative Financial Ability--An assessment is made as to the financial ability of each school district to provide the resources necessary to meet the need for vocational education. This determination is made by using the Tax Aggregate Report of Tennessee. The estimated current property value for each school district is divided by the net enrollment for all grades as an index of per capita property value. All school systems are then placed in rank order.

b) Low Income Families--This determination is made by using data from the School Fund Service Report. The total number of free and reduced-price meals in each school district is divided by the average daily attendance. All school systems are then placed in rank order.

c) Economically Depressed Areas--This is determined by the latest available annual average unemployment rate for each county.

The data for each of the factors are collected on a county basis. The listing for each factor is mathematically divided into five groups, each with common characteristics. Utilizing the results of these factors, a composite weight is established for each school district. These weights are used as a means for ranking the districts. Appropriations are then made based on the number of vocational programs operated.

Funding Programs for the Disadvantaged and Handicapped

Tennessee operates programs with the distinct purpose of meeting the needs for the disadvantaged, Vocational Improvement Program, and for the handicapped, Vocational Advancement Program. Federal and state funds are used for this purpose. The preceding formula for regular programs is used as a mechanism to distribute these funds.

Cooperative Education and Work Study Programs

Using the same formula as for regular programs, funds are allocated for cooperative and work study programs. Consideration is also given to the youth unemployment rate for each school district.

Adult Vocational Training

Each year applications are received from local school systems for funds to operate adult preparatory and supplemental programs. Many of these programs are operated in the evenings and serve to augment the skills of adults. Another major program operated with these funds is the training of licensed practical nurses. State funds are used to fund these programs, and allocations are made using the elements in the formula for regular programs.

Transportation Funds

With the enactment of the Tennessee Comprehensive Education Act, a number of vocational centers were constructed to serve more than one high school. Thus, to receive vocational training, students must be transported to the vocational center. The state has recognized that this transportation is an expense to local school districts; therefore, funds are allocated to systems based on the number of students and distance they are transported. State appropriations are used for this purpose.

Excess Costs for the Operation of Vocational Centers

The establishment of vocational centers has also imposed certain additional costs on local school districts, for example, utilities, janitorial services, and general maintenance of the facilities. State resources have been utilized to help offset some of these costs, and the number of programs operated by the center is used as a basis to determine each system's proportionate share.

Federal Funds for Postsecondary Programs

The State Board for Vocational Education, being the sole state agency for federal vocational fund distribution, allocates federal dollars to all postsecondary institutions, including the area vocational-technical schools, state technical institutes, and community colleges. The State Board is to insure that this amount is in compliance with federal legislation regarding minimum percentages and any other federal requirements.

Criteria being considered in allocating funds to technical institutes and community colleges and the relative weight of each are as follows:

1. Placement--32 (weight)

   The State Board believes that a critical element in an occupational training program is the program's ability to place program completers in occupations related to their training. Therefore, recognition will be given to institutions based on the established placement rate according to USOE/CIP/HEGIS codes. A uniform and approved method of reporting placement shall be used.

2. Instructional Cost Factors--36 (weight)

Factors considered are those imposing higher than average instructional costs (concentration of disadvantaged students, handicapped students, and students from families in which English is not the dominant language). The source of this data shall be the annual "Vocational Education Data System" report. Institutions must have certified documentation on file for each student reported in this classification.

3. Student Credit Hours--32 (weight)

Recognition shall be given to institutions for persons being served in occupational programs. The source of the data for persons being served shall be student credit hours according to the following definition: Student credit hours shall be the total number of hours generated in HEGIS taxonomies 5000-5599 and 05-Business and Management programs administered by the technical institutes and community colleges. The preceding three factors shall be combined to establish a weight for individual institutions. A proportionate share of the funds shall be given to each of the fourteen institutions (Tennessee State Board for Vocational Education, 1982, 1-2).

State Funds for Area Vocational-Technical Schools

A committee of AVTS superintendents in conjunction with the Division of Vocational-Technical Education developed a formula, approved by the SBVE, for determining the amount of state operating funds each AVTS will receive. The elements in the formula and weighted factors for each is as follows:

Administrative - 45,000 per school
Student Services- Student contact hours X .20
Academic Support- Student contact hours X .16
Instruction - Student contact hours X 1.50
Utilities - Allowance for FY 81-82 plus 15%
Maintenance - School square footage X 1.28
Special Needs - Unusual costs for which no increase in student contact hours is realized.

State Funds for Technical Institutes and Community Colleges

The Tennessee Higher Education Commission has developed a formula for the distribution of state funds for technical institutes and community colleges. The formula consists of two major elements: expenditure requirements and projected revenues. Each institution categorizes its expenditures according to the purpose for which the funds are spent. The table below indicates the major expenditure categories and their percentage of the total.

EXPENDITURES

Instruction and Academic Support	62%
Maintenance and Operation of Physical Plant	13%
Institutional Support	11%
Student Services	9%
Research	1%
Other Functions	

Revenues from areas such as tuition and interest income are subtracted from expenditures, and the difference derived comprises the request for state appropriations. Two key elements in the formula process are statewide average rates per student credit hour and the total projected student credit hours.

Contractural Arrangements between Technical Institutes and Area Vocational-Technical Schools

An important concept relating to the area vocational-technical schools is the recent development of a contractural arrangement between the area schools and the technical institutes. This arrangement, referred to as the Umbrella Plan, has three main functions: (1) to provide more flexibility in fiscal affairs, (2) to expedite the purchasing process, and (3) to insure promptness in personnel matters. Each of the four technical institutes provides these services for area schools in its geographic location.

In accordance with the agreement, a Tennessee Education Coordinating Council (TECC) has been established consisting of the technical institute president and the superintendents of the area schools which the technical institute serves in each grand division of the state. Membership in the TECC consists of at least one technical institute president and the area vocational-technical school superintendents in that area. The East TECC is divided between two technical institutes. Each TECC elects a chairman, vice-chairman, and secretary. The officers from each TECC serve as the Executive TECC Committee and have the authority to act for the council on pressing or timely matters between the council meetings and report these matters to the council members as soon as possible.

The TECCs provide coordination which minimizes program duplication and provides more efficient use of laboratory, classroom space, and equipment. The area schools maintain individual restricted budgets. In addition, each area vocational-technical school maintains its autonomy, curriculum, role and scope, and mission. The area vocational-technical schools maintain free tuition; maintain open entry/open exit instruction; and maintain their own superintendents and staffing structures. The Umbrella Agreement is renewed on an annual basis. The Umbrella Plan has been in operation since September 1, 1981, and has proven to be very satisfactory for both the technical institutes and the area vocational-technical schools (Division of Vocational Technical Education, 1982).

Special Problems

A problem identified in a public hearing held by the Subcommittee on Vocational Technical Education was the funding formula for higher education. The State Technical Institute Presidents felt that the funding formula for higher education, as recommended by the Tennessee Higher Education Commission (THEC), recommends a state appropriation for technical institutes that is inequitable compared to recommended state appropriations for the other components of the higher education community. The THEC has a schedule that establishes a 1982-83 enrollment base. Using the allotted base and dividing it into the recommended state appropriation, the President's Council calculated the following:

System	State Appropriation Per FTE
University of Tennessee	$ 2747
State Board of Regents	2481
State Technical Institutes	2010
Two-year Institutions:	
Community Colleges	2148
State Technical Institutes	2010

If the two-year institutions were funded at the same level, the difference in appropriations per base FTE of $138 would mean either that the technical institutes should receive an additional $1,279,950 or the community colleges should receive $2,706,870 less. These figures are based on the THEC budgetary enrollment base. The Presidents pointed out a very real problem which this base presents for their institutions. Even if one accepted the fact that, for some reason, the technical institutes should be funded at a lower cost per FTE than any other group of higher education institutions, the Presidents still felt that the enrollment base was inequitable.

The budgetary enrollment base is based on historical enrollment data. When one examines the most recent enrollment data and looks at trends, the implication of the FTE enrollment base becomes obvious. The base "rewards" those institutions with declining enrollments while those institutions that are vital and growing are penalized. The Presidents further stated that an examination of specific institutions revealed the following:

> In almost every case a school which has a lower enrollment in 1981, than either 1979 or 1980, has a higher budgetary enrollment base for 1982 than actual 1981 enrollment.
>
> In every case where a school has exhibited continuous growth through the three years or stayed constant, such as Jackson State Community College, the THEC budgetary enrollment base for 1982 is lower than actual 1981 enrollment.

Every one of the technical institutes is experiencing continuous increases in FTE students; yet the THEC formula allows funding for fewer students in 1982 than 1981 when all indications are that there should be many more.

Another problem found was "the distortion that results in per student cost when comparing the THEC enrollment base for 1982 with actual fall, 1981 data." The state was said to have actually funded three systems for $4,720,652 in average costs for students that did not exist, and this number would be even greater if there were another decrease in FTE in 1982. Meanwhile, at 1981 levels, the state technical institutes would have 723 FTE students or $1,453,230 at recommended average student appropriations not funded (State Technical Institute Presidents Council, 1982, 1-5). In summary, the complaint was that the state technical institutes were being funded at lower levels per FTE than any other group of institutions funded by the THEC formula, a situation further complicated by the fact that they were growing.

The THEC has responded to the accusation of unfair allocation of funds by suggesting a cap on enrollment. Its official position was that there were insufficient state funds for all students aspiring to higher education and that while institutions under the University of Tennessee Board of Trustees and the Board of Regents have limited their enrollments in line with the THEC recommendations designed to maintain quality, the institutions under the SBVE have not (Subcommittee Meeting, July 9, 1982).

Observations on Vocational-Technical Education Funding

A recent economic and financial forecast provided the following information on the status of funding for LEAs, AVTS, community colleges, and technical institutes. The data are based on total dollar expenditures over the last fifteen years.

LEAs

1. Historically (1969-81), LEAs have received proportionately more funding through foundation funds than via fund Code 331.45.
2. After adjusting for inflation, the real rate of growth in fund Code 331.45 was 2.8 percent over a period of 1969-81.

3. There has been a sharp decline in the federal contribution to 331.45 since 1975 which amounted to a 58.5 percent decrease from 1969-81.

4. Foundation fund revenues from state sources increased by 56.9 percent from 1978-81. Contributions from local sources increased 9.3 percent compounded annually. After adjusting for inflation, TFP funds increased at a compounded annual rate of 7.7 percent between 1978 and 1981. Funds from local sources increased by only 1.3 percent, overall percentage of TFP--state 75 percent, and local 27 percent.

AVTS

1. The federal government's contribution to AVTS has increased at a compounded annual rate of 4.7 percent over the last thirteen years. However, after adjusting for inflation, the federal contribution has declined by 1.9 percent in terms of real dollars.

2. Comparisons of period to period changes show that AVTS funds from state sources increased significantly, 16.3 percent, during 1969-75 but fell off to a 3.3 percent increase from 1976-81. State sources picked up when federal sources declined.

3. Historically funds from "other" sources represented small dollar revenues for AVTS.

Technical Institutes

1. In constant 1972 dollars, contributions from federal sources have reached an almost no growth situation with a 0.01 percent compounded annual increase.

2. In terms of constant 1972 dollars, the real rate of growth of state and other funds for technical institutes over the thirteen year period was 15.9 percent. State and other sources were 56.0 percent of the total funding in 1969. By 1981 the combined categories were 88.0 percent.

Community Colleges

1. Adjusting for inflation, the federal contribution reflected a real dollar decrease of 1.2 percent.
2. Community college vocational-technical education funding from "state and other combined" sources amounted to a remarkable 200.5 percent increase from 1969 to 1981.
3. In terms of percent of the total, community colleges over the thirteen year historical period became heavily dependent upon "state and other combined" sources for vocational-technical education funding, from 10.72 percent to 92 percent. The federal funding effort dropped from 89.3 percent in 1969 to only 7.0 percent in 1981 (Memphis State University, 1982).

Vocational Technical Education Survey Findings

Six statements on the Vocational Technical Education Survey focused on funding. The participants, educational administrators, instructional personnel, and business/advisory council representatives, were asked to indicate their opinions by responding to statements using Likert scale rankings.

The first statement was:

> State government has built-in incentives for business and industry to utilize vocational-technical programs for employee training.

The intent of this question was two-fold. It was asked to see whether the various groups were aware of any incentives, and if so, to what extent the employee training was utilized. This question had funding implications because it gauged how the vocational dollar was being spent relative to business and industry. It also gave an indication of the state's commitment to seeing that the needs of business and industry were being met. The employers of vocational-technical graduates and advisory committee chairpersons only generally agreed with this statement. The educational administrators group also generally agreed, but the instructional group disagreed. Apparently the instructional group felt that the state can do more to provide incentives to business and industry for employee training. Over 35 percent of the advisory/business group and the administrative group disagreed with the statement.

The second statement was:

> The funding for training adults is not keeping pace with the needs of the work force.

All groups agreed with this statement with the administrative group and instructional group strongly agreeing.

The third statement was:

> Overall instructional costs could be cut by providing courses in the actual work setting by potential employers.

Seventy-eight percent of the advisory/business group agreed with this statement. The administrative group had a mixed reaction with 51 percent agreeing and 49 percent disagreeing. The instructional group also showed no general consensus with 53 percent agreeing and 47 percent disagreeing.

The next statement was:

> The funding formula applied to state technical institutes and community colleges is equitable.

Advisory committee personnel generally agreed with this statement with 66 percent in agreement. There was no consensus in the administrative group with 43 percent agreeing and 57 percent disagreeing. The instructional group strongly disagreed with this statement with 46 percent disagreeing and 25 percent strongly disagreeing.

The fifth statement was:

> Students at area vocational-technical schools should pay tuition.

All groups generally agreed with this statement, however, over 30 percent among all groups disagreed. The advisory/business group showed more positive agreement about this statement.

The sixth statement read:

> The amount of money spent on secondary vocational programs is commensurate with the outcomes afforded each student.

All groups generally agreed with this statement with the advisory committee group showing the most positive agreement. A significant amount of disagreement was evidenced within the administrative and instructional groups with 44 percent and 42 percent disagreeing, respectively.

RECOMMENDATIONS ADOPTED BY THE VOCATIONAL-TECHNICAL SUBCOMMITTEE

The following recommendations were decided upon by the Subcommittee on Vocational-Technical Education after one year of extensive study. The findings are organized in four major sections: goals, governance, quality, and funding. It is the Subcommittee's desire that these recommendations improve the delivery of vocational-technical education in Tennessee.

I. GOALS

It was recommended that the following goals be adopted by the State Board of Education/Vocational Education as the goals for all vocational-technical education in Tennessee. It was also recommended that these goals be included in the Rules, Regulations, and Minimum Standards.

1. Develop in students pride in work, a sense of accomplishment, and a feeling of self-worth from a task well done.
2. Promote new industry and business throughout the State of Tennessee by providing skilled labor.
3. Promote trade, technical, or business related employment for all graduates of vocational-technical programs.
4. Develop the occupational awareness and decision-making skills of students at all levels of vocational-technical instruction.
5. Improve the composition of the labor pool throughout the state by providing training opportunities in specified areas of need.
6. Complement the goals of all education, including meeting needs of the handicapped and economically disadvantaged, in that through employment the quality of life improves.

7. Promote student mastery of basic skill development in the areas of reading, communications, and mathematics.
8. Provide vocational-technical education at whatever life stage the occupational training is needed.

II. GOVERNANCE

1. It was recommended to the Tennessee General Assembly that a new state board responsible for all postsecondary non-baccalaureate education including vocational rehabilitation, veterans education, and CETA should be established. The institutions under its charge would be the community colleges, technical institutes, and area vocational-technical schools. The purpose of this board would be to provide strong leadership and policy guidance for the forty institutions under its charge. The major functions of the board will include, but not be limited to, program regulation and approval, institutional licensure, planning, policy analysis, and budget review.
2. The economic development mission and role of postsecondary vocational-technical education in the State of Tennessee should be expressed in the creation of the postsecondary non-baccalaureate governing board. This board should establish the well-defined mission of the various delivery systems.
3. If a separate postsecondary non-baccalaureate board is created, the State Board for Secondary Vocational Education should remain the sole board responsible for the distribution of federal funds.
4. Because of tightening economic conditions and the need for greater accountability, vocational-technical governing boards should assume more of a role in quality control and evaluation.

5. All educational governing boards or representatives from each state board should meet together to discuss common issues at least twice a year and staff representatives should meet together at least four times a year. Coordination should be on a voluntary basis where possible.
6. Formal articulation agreements should first be developed between governing boards and then between co-located institutions, secondary and postsecondary. These plans should be maintained indefinitely and revised regularly.
7. Students who have dropped out of high school and are age seventeen or older should be allowed to enroll in postsecondary non-baccalaureate institutions if they meet the minimum admission requirements as established by the appropriate governing board.

III. QUALITY

Student Attainment

1. Access for vocational-technical education in this state is the right of every citizen. Because of the wide range of abilities of the individual student, the need for developmental studies is critical. Governing boards should require basic skills development in all institutions offering vocational-technical education.
2. In areas of low minority enrollment, efforts should be made to attract minority students.
3. Pre-service and inservice for counselors should include instruction in technical curriculum development, career education, employment practices, and experiences in business and industry should be made a part of either pre-service or inservice requirements.

4. Evening courses and weekend courses should be increased in order to accommodate more full-time workers.
5. When measuring student attainment for program accountability, institutions should consider: reasons for enrolling in the program, socioeconomic background, attitude toward education and work, self-assessment of ability, and the realities of the labor market.
6. Students enrolling in vocational-technical programs should be given pretests and post tests in order to measure competencies gained. Each student should be made aware of the specific skills and competencies he/she should possess at the end of training.

Personnel

1. All governing boards should develop an exchange program with business and industry. The purposes of the program would be to improve the quality of vocational-technical instruction and provide business and industry the opportunity to have more input into the educational process.
2. Counselors and administrators should pursue training in labor market data collection, analysis, and dissemination.
3. Teacher education institutions should have clearly established goals, objectives, and practices relative to vocational-technical education on the undergraduate and graduate level.
4. Vocational-technical teacher educators should be exposed to "state of the art" and new and changing technology.
5. Placement personnel in any institution offering vocational-technical instruction should have strong business/industrial experience.

6. A standard affirmative action plan should be developed for all public schools in Tennessee.
7. Industrial leave should be strongly supported by the governing boards and institutional administration.
8. New and part-time instructors should be required to participate in a comprehensive orientation before classroom duties are assigned.
9. Instructional planners and administrators need to constantly develop relationships and contact with industry and business to make sure that the sequence of job skills taught in their programs is appropriate.
10. There is a serious lack of technical education instructional personnel. Comprehensive statewide planning for staff development for technical educators and alternative methods for training need to be developed. This training should emphasize teaching skills for new instructors and technological update for current instructors.

Long-Term

1. Salaries for "state of the art" technical or business technology instructors need to be increased to at least minimum private industry scale.
2. Where possible, vocational-technical instructors should be given competency based testing before receiving certification, tenure, or being taken off initial probation status.

Program Identification and Selection

1. Based on a set of predetermined standards established by the governing board, nonproductive programs should be terminated and

replaced with productive ones. Governing boards should leave the responsibility of program justification to the local institutions. No programs should be automatically continued.

2. The appropriate governing boards should develop a more thorough student follow-up system to improve the data base for quality control and curriculum revision.
3. The appropriate governing boards should give extra consideration for increased funding for those institutions planning high technology programs.
4. The process of new program approval should be altered to reduce the long lead time that impedes the progress of new program implementation.
5. Steps should be taken to improve the validity of employment needs surveys and labor market projections. These data are crucial in forecasting the needs of business and industry.

Accreditation/Evaluation

1. Accreditation is only one indication of quality. It should be viewed as a minimum requirement and institutions should use it as a base upon which to improve.
2. Institutional evaluations should have broad-based involvement. Evaluations should include instructors, advisory committees, administrators, support personnel, students, community organizations, and the private sector.
3. Institutions should include the results of the evaluations in their promotion and publicizing of vocational-technical programs. Business, industry, and the public should know that the state is concerned with providing quality training in the most effective and efficient manner.

4. The appropriate governing board should develop a vocational-technical evaluation system. Emphasis should be placed on helping instructors, curriculum coordinators, and policymakers establish criteria by which to measure program effectiveness.

5. In determining the quality of vocational-technical programs several indicators and measurements should be utilized. Governing boards should approve policies which establish the indicators of quality and serve to monitor the various programs and institutions. In order to guarantee that students receive the best training available, these indicators should include:

    A. carefully coordinated authorization on licensure procedures
    B. evaluation based on qualitative and quantitative criteria
    C. program planning based on the budget
    D. coordination of institutional planning with statewide planning.

6. The evaluation of institutional and instructional quality should at least include instructor qualifications and background, student placement rate, and a review of course content.

IV. FUNDING

1. Although there has been constant growth in federal funds to the state since 1972, during the last five years a steady decline in real dollar value has occurred. The General Assembly and governing boards should be aware of this and stand ready to explore alternative funding sources for vocational education to replace the lost federal dollars.

2. The State Board for Vocational Education should increase its efforts in seeing that districts or counties with limited fiscal capacity receive a

large enough share of federal funds to significantly improve their ability to provide programs of high quality.

3. If the distribution of federal funds is to be partly based on a uniform approval method of reporting placement, all institutions eligible for receipt of these funds should have input into the development of the definition of placement and the method by which placement is reported.
4. Well developed articulation plans should be initiated by co-located institutions for future planning. This should prevent any unnecessary duplication and provide information regarding what should be duplicated based on local needs.
5. Institutions with low enrollments should actively pursue vocational-technical training agreements with business and industry.
6. The appropriate governing boards should encourage the institutions to develop a realistic equipment replacement schedule, continuously updated with two, five, and ten-year projections. The General Assembly should give careful consideration to providing funds for this replacement schedule.
7. Efforts should be made by the governing boards to promote training programs in the actual work setting by potential employers; this training should be coordinated by vocational-technical instructors and administrators.
8. High technology programs and equipment should be placed in those institutions whose missions best address the specific needs of high technology as well as business and industry.
9. Institutions and LEAs should spend federal funds for program improvement rather than program maintenance where possible.

10. The appropriate governing board should monitor the success or progress of each educational delivery system and establish funding priorities based on the needs and the economic condition of the state.
11. Institutions should be allowed to reallocate any funds saved by the reduction of programs resulting from increased articulation and coordination efforts with other institutions.
12. Students at area vocational-technical schools should pay a minimal tuition, and in the collection of fees, efforts should be made to allow the revenue earned to go to the operating budget of the area school. The largest percentage of the extra revenues should be for instruction, equipment, and supplies.
13. Since the number of Tennesseans enrolled in vocational-technical education can affect the decisions as to whether business and industry settle in Tennessee, since unemployment is at its highest peak in forty years, since future needs will require more technicians and occupationally specific workers, and since the educational dollar in the state is buying less and less, caps or limitations on enrollment in any institution whose main mission is to provide training and upgrading for employment should be imposed only as a last resort.

Long-Term

1. The General Assembly should provide incentive monies for those institutions providing exceptional quality programs.

CHAPTER SIX

HIGHER EDUCATION

I. INTRODUCTION

The last comprehensive study of public higher education in Tennessee was completed in 1957. At that time 21,113 full-time students were enrolled in the seven public postsecondary institutions (Pierce and Albright, 1957, 319). These institutions included: Austin Peay State College, East Tennessee State College, Memphis State which had just been granted university status by the General Assembly, Middle Tennessee State College, Tennessee A & I State University, Tennessee Polytechnic Institute, and the University of Tennessee at Knoxville, Martin, Memphis, and Nashville. The University of Tennessee was governed by its own Board of Trustees; the other institutions were under the jurisdiction of the State Board of Education. There were no area vocational-technical schools, no community colleges, no technical institutes. The golden age for higher education was less than a decade away.

The decade of the 80s is expected to bring an end to that golden age. The rapid enrollment growth and institutional expansion of the era past have slowed to a maintenance level. Higher education is now challenged to provide new kinds of educational expertise to a highly varied clientele. Although the pressures of haphazard growth and expansion have passed, the demands for more technologically oriented programs during a time of financial stringency create new problems. To address these factors currently affecting higher education, educators are evaluating their strengths and weaknesses to determine where they excel and in what ways they can provide the educational opportunities required of a technological society.

This study is an opportunity for such evaluation. The charge to the Higher Education Subcommittee was sweeping in scope yet realistic in recognizing current realities. The Subcommittee was to review and determine what the goals for Tennessee higher education should be. It was to consider and make recommendations regarding the organization and governance structure of higher education. It was to determine indicators of educational quality and in what ways such quality may be achieved, particularly in terms of teacher preparation programs. It was to consider the issue of funding and more particularly the adequacy of the current funding formula. Its recommendations have been drafted with respect for current and future state needs and for the enrichment of public higher education in Tennessee.

II. GOALS FOR HIGHER EDUCATION

Background

There are at least two theories of what the proper ends and means of a postsecondary education should be, a classical theory and a progressive or pragmatic theory. From the classical view, the chief goal of education is mental development; therefore, the humanities serve as the core of study. From the progressive view, the chief goal of education is to help individuals expand their faculties to their full potential; that is, individual development of selfhood is of primary concern (Weatherford, 1960, 2).

These theories coincide with the development of American higher education. Initially colleges and universities were established in the United States to educate "gentlemen" in ministry, or the professions. The curriculum was classical, concentrating on the cultural heritage of Western civilization.

By the late 1800s the need for more specialized education became apparent. The country was undergoing rapid industrialization. In response, Congress fostered a land-grant program which created new professional schools in the fields of agriculture, engineering, and business. For example, the second Morrill Act of 1890 stipulated that the federal dollars used to support land-grant colleges must be allocated to the practical not the classical arts. As a result colleges had a new purpose and a different student clientele. A college education was no longer perceived as a series of mental exercises that would develop a gentleman; it had also come to be recognized as a way to gain specialized knowledge that could provide satisfactory employment. This dual perception of the purpose of a college education led to what Kenneth Ashworth calls, "the American system of diversity," where "schools for the gentlemen and the professions and schools providing vocational training in farming, ranching, and applied sciences like engineering were allowed to coexist" (Ashworth, 1979, 27).

As the nation's needs grew and changed, this diversity became ever more apparent. After World War II, for example, new educational programs were developed to meet the technological advances of industry and the diverse educational needs of the war veterans. Thus, postsecondary institutions offered not only a strong general education or liberal arts component which could lead to professional studies, but one-year or two-year programs in any number of technical fields as well. As Ashworth points out, "The government's GI Bill caused colleges and universities to expand enormously and, in absorbing more than 2.5 million veterans, to reach new groups of the population never previously served" (Ashworth, 30).

This concept of diversity in American higher education has been further broadened by "the shift from elite to mass education and now to universal access. . . . The students are more varied in their origins and in their destinations . . ." and have come to regard a postsecondary education as "an opportunity to survey alternatives and learn how to make choices among them . . ." (Carnegie Foundation, 1977, 5). The variety of perspectives regarding the purpose of a higher education influences the language of its goal statements.

A second influencing factor is the tenor of the times. Goals are set in response to the philosophical orientation and nature of the society they are intended to guide. An example of this is found in the goal statements drafted by the Carnegie Commission in 1973. Included in their list of the five major purposes of American higher education for the last quarter of the twentieth century is the statement, "The enlargement of educational justice for the postsecondary age group" (Carnegie Commission, 1). It was drafted in response to two strong movements occurring in the late 1960s and early 70s, the civil rights movement and the college student revolts. Another example of goals reflecting current societal needs may be seen in the goals list developed by the Southern Regional Education Board (SREB) in its position statement "Priorities for Postsecondary Education in the South" which includes, "Postsecondary education should guide the region in solving social problems created by population changes, racial differences, urbanization, and technological growth" (SREB, 1976, 2). Consequently, goals selected as appropriate for Tennessee higher education today may be quite different from goals selected as appropriate twenty-five years ago.

Tennessee Goals

The fourteen goal statements included on the Higher Education Survey instrument (see survey design in Chapter One) were based upon recurring goal statements found in the literature. The list included the five goal statements prescribed by the Tennessee Higher Education Commission (THEC) in its 1979-84 Statewide Master Plan. They are:

> Provide educational opportunities for all citizens who have the ability and interest to attend college.
>
> Develop and maintain quality programs in instruction, research, and service.
>
> Promote differences in public institutional mission and recognize the role of the state's private institutions.
>
> Provide those programs that are responsive to current needs and plan for future program and service needs.
>
> Maintain and demonstrate integrity of purpose and practice and effectively apply resources (THEC, 1979, 56).

In addition, two of the five SREB goals were included in the list with some modification, these were:

> Provide instruction and experiences that develop students' understanding of society and the responsibility of the individual within it.
>
> Guide the nation, state, and/or community in solving social problems such as those created by population changes and differences, urbanization and technology.

A third SREB goal, "Achieve excellence in teaching, scholarship. and research" is reflected in the THEC goal, "Develop and maintain quality programs in instruction, research, and service."

The suggested Carnegie goal, "The provision of opportunities for the intellectual, aesthetic, ethical, and skill development of individual students," was addressed with several different goal statements, including:

> Provide instruction and experiences that develop students' awareness of their own physical and intellectual capacities.
>
> Encourage aesthetic sensibility.
>
> Provide experiences that develop students' personal value standards and ability to evaluate alternatives.
>
> Provide training that will aid in employment.

These goal statements also reflect the thrust of a number of goal statements developed by Bowen (1977, 23).

Also considered were the goal statements of the Commission on Higher Education of the Middle States Association of Colleges and Schools. The Commission suggested that a higher education essentially should:

> Encourage the pursuit of lifelong learning.
>
> Provide instruction and experiences that develop abilities of judgement and preferences (Commission on Higher Education, MSA, 1982, 4).

The fourteenth goal statement was a composite statement drafted to address recurring statements in the literature regarding an understanding, if not appreciation, of cultural heritages. The statement reads:

> Provide instruction and experiences that develop students' awareness and tolerance of culture and values different from their own.

Those receiving the questionnaire were asked to rank each of the goal statements on a scale of one to eight, with one representing most important and eight representing low importance. The respondents were then asked to select the five most appropriate goal statements for higher education in Tennessee. Based on their rankings the goal statements were selected as follows:

ITEM	TOTAL PERCENT
1. Develop and maintain quality programs in instruction, research, and service.	71.4%
2. Provide educational opportunities for all citizens who have the ability and interest to attend college.	64.4%
3. Provide training that will aid in suitable employment.	48.0%
4. Provide instruction and experiences that develop students' awareness of their own physical and intellectual capacities.	43.6%
5. Encourage the pursuit of lifelong learning.	41.4%
6. Provide instruction and experiences that develop students' personal value standards and ability to evaluate alternatives.	39.4%
7. Provide instruction and experiences that develop students' understanding of society and the responsibility of the individual within it.	32.0%
8-9. Provide instruction and experiences that develop abilities of judgement and preference.	30.3%
8-9. Provide those programs that are responsive to current needs and plan for future program and service needs.	30.3%
10. Provide instruction and experiences that develop students' awareness and tolerance of culture and values different from their own.	27.6%
11. Maintain and demonstrate integrity of purpose and practice and effectively apply resources.	22.1%
12. Guide the nation, state, and/or community in solving social problems such as those created by population changes and differences, urbanization and technology.	13.1%
13. Encourage aesthetic sensibility.	7.4%
14. Promote differences in public institutional mission and recognize the role of the state's private institutions.	4.8%

These goal statements serve as the overriding goals for Tennessee higher education. The individual postsecondary institutions should develop their own clearly defined mission statements within these parameters. A recent review of the institutions' role and scope statements indicate that many are attempting to be "all things to all people." As the Carnegie Commission and others have stressed, not all the broadly stated goals for higher education can or should be carried forth by all postsecondary institutions. The recognition of the diversity of mission and purpose in American higher education underscores this position. It would be in the best interest of the state, therefore, to ensure that these goals are accomplished statewide but in different ways at different institutions. Clearly delineated mission statements indicating which institutions would carry forth which of the above goals would enable them to be met collectively but not necessarily at every institution. Given the variety of postsecondary educational opportunities offered across the state and the resources currently available to support them, the recognition of diversity among institutions is a positive way to provide for postsecondary education for Tennesseans.

III. HIGHER EDUCATION GOVERNANCE

Introduction

The literature does not abound with information regarding external governance of higher education institutions. There are several reasons for this. One may be that lay boards have traditionally been an influential factor in postsecondary governance, while coordinating/governing agencies are relatively new additions to the American higher education structure. In addition, there is no prescribed format for the structuring of a statewide governance model.

Public higher education went through rapid expansion in the 1960s and 70s with enrollment growing from approximately 2.1 million in 1960 to 8.7 million in 1976 (Carnegie Council, 1980, 15). In 1950 higher education enrollments were half in public and half in private institutions. However, the tremendous emphasis on education brought about by the Russian Sputnik achievement and the increased number of 18 to 24-year olds of the post-World War II baby boom aspiring to a higher education caused a great demand for higher educational opportunities in the public sector.

To meet the problems and issues arising from this demand, states which had not had higher education coordinating/governing boards began establishing them. Twenty-four such boards were established between 1960 and 1975 (Education Commission of the States, 1979, 50). They were created by each state's political structure based on perceived needs. Consequently, the legal basis for such boards in the southern region, for example, vary from constitutional to statutory. Only Georgia and West Virginia have similar governance structures.

Because the coordinating/governing boards were created in the political arena, their power and functions vary greatly. Their degree of coordinating duties and responsibilities reflects the desire of the executive and legislative branches of state government to control or manage higher education. In the southern region the coordinating/governing boards have the responsibility for planning and coordination, institutional budget review and consolidated budget recommendations, and some aspects of program approval (SREB, 1980, 2). However, no two states have vested the same amount of control in these boards; thus, some recommend while others mandate.

In addition, the 1980s have begun with a radically different set of issues than those faced by higher education in the 1960s and 70s. Continuous growth has given way to financial pressures requiring consideration of consolidation. Demographic projections indicate a 10 percent drop in the 18 to 24-year old population in the next ten years. Current student clientele have changed not only in terms of age and educational preparedness but also in terms of career aspirations and, therefore, types of academic degrees sought. Inflation is expected to continue further eroding the constant dollar value of state appropriations. The economic climate has been slow to improve forcing financial cutbacks. In light of these factors a number of states have created commissions or study groups to assess the current status of public education and to determine whether or not those agencies created in the 1960s and 70s can effectively deal with the challenges of the 1980s.

Background

Currently in Tennessee there are three governing boards concerned with postsecondary education: the Board of Regents, the Board of Trustees of the University of Tennessee System, and the State Board of Vocational Education. Additionally, the Tennessee Higher Education Commission acts as a coordinating agency with budget oversight and long-range planning responsibilities.

None of these agencies were created overnight. The University of Tennessee, for example, began as a private college in 1795 chartered by the Territorial Assembly as Blount College. In 1806 the General Assembly designated Blount College to receive monies realized from the interest on the sale of public lands and renamed it East Tennessee College; in 1879 it was renamed the University of Tennessee. The University is governed by a twenty-three member Board of Trustees: eighteen are appointed by the Governor; five serve as ex officio members including the Governor, the Commissioners of Agriculture and Education, the President of the University, and the Executive Director of the Higher Education Commission, the only nonvoting member. The University's charter gives the Board of Trustees full and complete control over the University's organization and administration, its constituent parts, and its financial affairs.

In 1909 the General Assembly passed the General Education Bill which provided funding for elementary and high schools and established four normal schools for teacher training. Three were designated as teacher training schools to be located in the three grand divisions of the state, and the fourth was the Agricultural and Industrial Normal School for Negroes to be located in Nashville (Acts of 1909, Chapter CCLXIV). In 1915 the General Assembly established the Tennessee Polytechnic Institute at Cookeville (Acts of 1915, Chapter XXXV), and in 1927 established the Austin Peay State Normal School at Clarksville and the University of Tennessee Junior College at Martin (Acts of 1927, Chapter L). These teacher training colleges were governed by the State Board of Education which is appointed by the Governor as is the University of Tennessee Board of Trustees. However, in governing their respective higher education institutions, the two Boards operated independently of one another.

Such a dual system of control for a state program was unique; all other state-supported agencies operated as single unit, i.e., one agency for corrections, highways, public health. What resulted was duplication of programs and intense competition for students and appropriations (Wood, 1982, 9-10). No systematic way was provided to allocate state funds to the higher education institutions; Wood quotes former Commissioner of Education J. Howard Warf:

> Each college president came to Nashville during the Legislature and stayed here. It was every man for himself. The basic fight was between the University of Tennessee and the State Board of Education people, the State Board being represented by me as the Chairman of the Board and as Commissioner of Education. Gradually the idea evolved that there needed to be some coordination. For a long time it was simply a point of who was strong enough politically to get the appropriation. I can remember being up at the Capitol at midnight fighting with Andy Holt (President of the University of Tennessee), Ed Boling (Commissioner of Finance and Administration), and the others over money. If it wasn't so serious, it would have been funny (16).

In their study of public higher education in Tennessee in 1957, Pierce and Albright also noted the need for an objective method to allocate state funds to the postsecondary institutions (39). Among their recommendations was the establishment of a Higher Education Commission which would provide direction "in the areas of planning, research, the study of financial needs, budget reviews, and coordination" (48). Ten years later the General Assembly created the Tennessee Higher Education Commission (THEC) to perform those duties.

In that ten years, however, dramatic changes had occurred in the landscape of Tennessee postsecondary education. In 1963 the General Assembly established "a statewide system of area vocational-technical schools, and regional technical schools, to meet more adequately the occupational and technical training needs of citizens and residents of this state" (T.C.A. 49-2609). The State Board for Vocational Education was directed to carry out this intent of the General Assembly; three technical institutes and twenty-six area vocational-technical schools were authorized. In 1965 the General Assembly authorized funding for the operation, maintenance, and control of the state's first three community colleges, and in 1967 amended that legislation to indicate support not only for those three institutions but for "such state community-junior colleges as shall hereinafter be established" (Nicks, 1979, xxix). In addition, "University status was achieved by East Tennessee State University in 1963, by Tennessee Technological University and Middle Tennessee State University in 1965, and Austin Peay State University in 1967. This action made all six of the senior institutions then governed by the State Board of Education, including Memphis State University and Tennessee State University, graduate degree granting institutions" (Nicks, xxxii). Consequently, the newly formed THEC was faced with a number of coordination issues. Wood states:

> Following the creation of the THEC in 1967, one of the first issues the nine-member lay board addressed was the problem, as they viewed it, of the state's regional universities being under the same governance structure with K-12 in the 95 counties, the nine community colleges, three technical institutes, and twenty-five area vocational schools. Some people believed that this many schools under one board were far too large for proper attention and focus to be given to either the higher education institutions or the other schools in the system. There was a continuing belief that the four-year regional universities in particular needed to have a governance structure which would place them as a group on par with the University of Tennessee institutions, both educationally and politically (37).

Thus, in its 1969 Biennial Report to the Governor and the General Assembly on higher education, the THEC recommended that the six State Board universities be placed under their own board and that an additional board be created for the community colleges (THEC, 1969, 16).

In 1971 Governor Dunn appointed a citizens' committee to review public higher education in the state. The Andrews Report, the resulting document, recommended, "a State University System with its own board be established to govern the six universities now regulated by the State Board of Education" (Report, 1971, 11). The committee further recommended:

> Eventually, the community colleges should have their own Board, but at present, we think they should continue to be governed by the State Board of Education. Thus, we do not recommend that the community colleges be brought

> under the new State University Board. Because of the peculiar access of vocational schools to Federal funding, we feel it advisable that the State Board of Education continue its governance of vocational, technical and special schools (14).

It was felt that a new board would bring about more efficient management of the regional universities, that the State Board for Education would be able to devote more time to the planning and policy issues of grades 1-12, and that there would be a better balance of power between the two university systems. The resulting legislation, however, placed the community colleges as well as the regional universities under the administration of the new Board of Regents of the State University and Community College System. The Board is composed of seventeen members: eleven appointed by the Governor; four ex officio members including the Governor, the Commissioners of Agriculture and Education, and the Executive Director of the Higher Education Commission, the only nonvoting member; the immediate past Commissioner of Education as of July 1, 1972; and a student member appointed by the Governor (T.C.A. 49-3237).

Since the Board was established in 1972, the issue of vocational education coordination has been an ongoing concern. Such concern can be seen in the literature of the THEC which acts as the coordinating agency for public higher education in Tennessee. For example, in the 1973 Master Plan, Higher Education for Tennessee's Future, the THEC states:

> There is a need for more effective coordination of vocational education with higher education and grades 1-12. The State has established a system of vocational schools, and the legislature is urging its expansion. At the same time, however, there is competition and some duplication of effort between vocational programs in the high schools, the new vocational-technical schools, technical institutes and vocational programs in the colleges. This problem is inherent because all parts of education are vocational, but it indicates the importance of more effective planning and coordination of such efforts (18).

The Commission did not believe this situation to be critical enough to restructure higher education governance at the time as the State Board of Regents had only recently been created. The Commission did suggest, however, "It may be desirable to set up a separate governing board for the community colleges in the future . . ." (THEC, 17). In its 1974 Biennial Report the Commission again suggested, "The increase in vocational education opportunities, however, must be coordinated so that unnecessary duplication of effort between vocational-technical institutions and community colleges is avoided" (3).

In 1978 the THEC employed three consultants to aid in the establishing of guidelines for the coordination of community colleges and technical institutes because oversight for the technical institutes had been added to the Commission's responsibilities by statute. Since the area vocational-technical schools also offered postsecondary programs, they were included in the study. The consultants stated, "It is apparent that the missions of technical institutes and community colleges overlap. Further, to the extent these institutions expand their programs to include non-degree programs, their missions will also overlap those of the area vocational-technical schools. This overlap in mission is already apparent in some non-credit continuing education courses" (THEC, 1978, 15). This situation is not unique to Tennessee as the consultants pointed out, "National trends already recognize the similarity of the technical institutes and community colleges. The American Association of Community and Junior Colleges lists all two-year colleges as though they were the same type of institution" (31). However, the consultants did note that each type of institution had its own strengths and believed that these should be sustained (38).

To this end their immediate recommendation was that the THEC aid in the development of regional plans for the Memphis, Nashville, Knoxville, and Tri-Cities areas. These plans would specify the unique missions, service areas, and specific programs to be offered in each area by the community colleges, technical institutes, and area vocational-technical schools if possible. With the cooperation of representatives of each of the institutions in these areas such plans have been developed.

In November 1979, the House Joint Subcommittees on Higher and Vocational Education requested that the THEC specifically state its opinion as to the feasibility of transferring the technical institutes from the State Board of Education to the State Board of Regents as well as presenting recommendations on any other form of governance for the public higher education institutions in the state. The THEC did present eleven governance/coordination options for the two-year public institutions; however, no specific recommendation was made.

In January 1982, the Long-Range Planning Committee of the Tennessee State Board of Education made the following recommendation:

> Recognizing the increasing responsibility for improvement of educational quality in grades K-12 for the public school systems in Tennessee, the committee recommends that the State Board of Education support a new postsecondary board for governing all area vocational schools, technical institutes, and community colleges. It is intended that the board hereby proposed will respect the integrity of the free-standing technical institute as it has been recognized in Tennessee. The State Board of Education shall retain its current authority for comprehensive secondary vocational education.

The State Board accepted the report but as yet has not acted upon the recommendation.

This is a brief overview of the evolution of Tennessee's higher education governance structure. It has not focused on the personalities or the political realities which were guiding the state's growth and industrial expansion. However, the four systems of public postsecondary education in Tennessee attest to the importance its leaders place on providing a broad array of educational opportunities for its citizens. What must now be determined are the ways to optimize the strengths of these systems.

Governance Options

The legislation creating the community colleges did not define a specific mission for these institutions. Rather, in their individual role and scope statements the institutions refer to the historic or traditionally recognized community college mission which is: (1) to provide the first two years of a four-year degree program, often referred to as university parallel studies, (2) to provide career-oriented programs, usually in technical fields and not designed for transfer to four-year institutions, (3) to provide developmental studies for students needing additional preparation for college level work, and (4) to provide programs of non-credit continuing education designed to meet the local needs of business, industry, and general service. In addition, legislation creating the technical institutes established that each school "shall function as a two-year terminal training center for the purpose of (A) training engineering technicians for industry, and (B) preparing the student to earn a living as a technician or technical worker in the field of production, distribution, or service"; the area vocational-technical schools "have mission expectations similar to the four technical institutes but usually at a skill rather than technical level" (THEC, 1978, 14-15).

The similarity of mission emphasis on preparation for employment reflects a particular perspective of higher education, a perspective that was given strong focus in the 1957 Pierce, Albright study of public higher education in Tennessee. They wrote, "it is public education upon which the people of Tennessee will depend most for the development of the patterns of skills demanded by an increasingly complex industrial order" (1). They further elaborated:

> To improve the quality of manpower resources of the State, more education and a better quality of education are needed. In addition to other considerations, educational improvements are necessary to raise the level of training and skills of the State's future labor force (persons gainfully employed or seeking employment). Larger and larger shares of the working population must possess skills and technical competence built upon an adequate, basic education, or the social and economic development of the State will be severely handicapped (16-17).

Their position that all who could profit from the college experience should have an opportunity to receive such an education, coupled with their recommendation that higher education opportunities should be readily accessible to the youth of the state, "generated great interest for expanding the Tennessee higher education program" (Nicks, xiv). The position Pierce and Albright took in 1957 regarding education for technical competence based upon a basic education is still valid today, perhaps even more so.

The citizens of Tennessee are fortunate to have such a variety of postsecondary institutions which provide a broad spectrum of educational opportunities. We need to capitalize on this strength. One way would be to place those institutions with similar missions under their own governing board; these would include the area vocational-technical schools, the community colleges, and the technical institutes. The advantages would be:

1. Coordination of all two-year college and postsecondary vocational-technical programs, this implies:
    a. cost efficient utilization of resources and equipment

   b. central clearing house for program availability and potential
   c. immediate responsiveness to business and industrial needs
   d. capability for more thorough long-range planning.
2. Consideration of the specialized needs of the postsecondary, two-year institutions, this implies:
   a. Funding would not be done on a comparison basis to four-year institutions.
   b. Funding could recognize enrollment growth.
   c. Funding could recognize programs of excellence.

Simply put, such coordination would ensure the continued development of quality technical and transfer programs that would be most responsive to technological changes in the market place. This proposed governance change appears most frequently in other studies that have been done on higher education in Tennessee. It provides for central coordination of all vocational-technical programs in the state and the capability for long-range planning utilizing all these resources.

The disadvantages to this proposed change are:

1. It creates another governance structure.
2. It incurs possible additional expense for personnel.
3. It may create political ramifications the state is not willing to endure.

Another alternative would be to move the governance responsibilities for the technical institutes to the State Board of Regents. Because the Board currently has governance authority over the ten community colleges such a move would provide direct coordination of the two types of institutions.

The advantages would be:

1. The responsibility for coordinated planning is simplified.

2. Closer operational control is assured with the coordination responsibilities vested in a single board.

The disadvantages would be:

1. Planning for postsecondary vocational-technical education is not as easily coordinated as the area vocational-technical schools are still under the governance of the State Board of Education.
2. The role of the technical institute could become blurred.

A third alternative would be to move the governance of the area vocational-technical schools as well as the technical institutes to the State Board of Regents. The advantage would be that all such institutions with a similar mission thrust would be coordinated by a single board. However, this would place forty institutions with varying degrees of involvement in vocational-technical education under the auspices of a board already coordinating the programs and budgets of six regional universities. Thus, a modification to this third alternative might be to create a Division of Vocational-Technical Education within the framework of the State Board of Regents' organization to ensure adequate coordination of the three types of institutions.

A fourth alternative would be to expand the role and scope of the four technical institutes to become technical community colleges. A precedent has already been established with the creation of Chattanooga State Technical Community College, which is governed by the State Board of Regents. The advantage would be that the initial plans for Tennessee's community college system would be carried forward and that all postsecondary two-year degree granting institutions would be under the same system of higher education governance. The disadvantage would be that the distinctiveness of technical institute program offerings would be lost. However, it should be noted that student enrollment and transfer figures kept by the THEC indicate that in 1977-78 "in the community colleges as a group 13 percent of the graduates of occupationally classified programs transferred after graduation into another public institution. Similarly, 13 percent of the graduates of technical institutes were transferred into other public institutions after graduation in that same year. For 1978-79 the percent of community college occupational graduates transferring after graduation was 11.2 percent and the number for technical institutes was 10.2 percent"; to the THEC this indicated "that universities are apparently recognizing for transfer of credit purposes graduates of these two types of institutions in very similar ways" (THEC, 1980, 5).

In addition, a review of the Tennessee Code Annotated indicates that the issue of governance of vocational-technical education is not clearly addressed. Part of the problem is that the area vocational-technical schools and state technical institutes were created under the jurisdiction of the State Board for Vocational Education (T.C.A. 49-2616), yet vocational-technical programs were also established in comprehensive high schools under the authority of the State Board of Education (T.C.A. 49-27-107). While it is recognized that the difference between these two boards is titular only, the governance structure of the area vocational-technical schools is such that the potential for duplication among all these institutions involved in offering vocational-technical programs is great. The legislation makes no clear distinction regarding difference of mission among the area vocational-technical schools, the comprehensive high schools, the community colleges, and the technical institutes; all are offering programs that are vocational in nature yet are governed by different boards. A change in legislation that would provide for better coordination of these programs would be beneficial.

Proposed governance changes for postsecondary two-year institutions have implications for the four-year institutions. For example, if a new institutional governing board were established to govern the area vocational-technical schools, community colleges, and technical institutes, what would be the role of the State Board of Regents? Historically, the State Board of Regents was first envisioned as the governing board for the regional universities, then referred to as the normal schools. Thus, it would not be inconceivable that the Regents would continue to function in that capacity.

However, to save duplicative administrative costs, other states have consolidated various universities into multicampus systems. Such systems have been established in California, Illinois, Missouri, New York, North Carolina, Texas, and Wisconsin. Each was created in the particular political, social, and economic climate of its state. These multicampus systems are thought to have:

> the advantage of size and the added benefit of a form of governance with potential for variety and change. Even with fewer students and less support, a multicampus system can maintain its effectiveness by pursuing the objectives of campus diversity, where the system promotes different academic and administrative approaches at different campuses; campus specialization, where different goals are designated for different campuses; and campus cooperation where academic resources are shared by several campuses (Lee and Bowen, 1975, 4).

In their study of multicampus systems over a five-year period, Lee and Bowen have found:

> . . . many important policy decisions involving public higher education within a state can be more effectively resolved by an educational institution than by arms of state government. It is true that the central administration of a multicampus system is one step removed from the internal administration of campuses, but these are university systems, not state agencies, and differences between the two are profound.
>
> . . . for example, decisions on program expansion or curtailment remain basically a campus prerogative, but one now informed by a wider understanding of systemwide

> resources, by systemwide stimulation of possibilities for regional coordination and cooperation, and by new guidelines and policies for evaluating program proposals. To the extent that campuses, single or in concert, can effectively shape their destiny, consistent with the wider needs of the system and the state, higher education is the better (147).

Thus, a fifth alternative governance structure would be to include all public, postsecondary institutions offering two-year degrees or less under one two-year governing board, such as, the Vocational-Technical Community College System of Tennessee, and consolidating all four-year degree granting institutions under one four-year governing board, such as, the University System of Tennessee. All existing institutions would retain their current designation and would establish their own lay boards to act as liaisons to their respective governing boards. In this way, each institution would maintain its own operating autonomy, answering to the governing board in terms of program offerings and funding.

The advantages to this system are:

1. coordinated program control which would:
    a. prevent unnecessary program duplication
    b. provide cost efficient utilization of resources and equipment
    c. provide a central clearing house for program availability and potential
2. centralized data base for information on all four-year institutions
3. minimizing the layers of governance for postsecondary four-year institutions
4. capability for more thorough long-range planning.

The disadvantages to this proposed change are:

1. It can become autocratic.
2. It may create political ramifications the state is not willing to endure.

The needs of the state, its political and economic climate must be assessed. Of primary concern is whether the state is ready to promote the variety of its vocational-technical programs and enhance the operation of its four-year institutions to strengthen its educational and research resources. Perhaps that is the long-range goal with intermediary steps along the way.

IV. EDUCATIONAL QUALITY

A. Teacher Preparation Programs

Background

In the quest for quality in public education a number of states have established commissions or task forces to determine the priority issues and problems that must be addressed to strengthen education at all levels. One such task force was appointed by Governor Bob Graham, Chairman of the Southern Regional Education Board (SREB), in January 1981. In its attempt to grapple with the elusive question of educational quality, the SREB Task Force determined three major priority areas that needed strengthening. The first and most important was teacher preparation programs.

It is not difficult to understand why. Edward Eddy, Provost of Pennsylvania State University, summed up the situation most succinctly:

> Illiteracy is the single most perplexing problem facing colleges and universities. To abolish it, we need to begin at the beginning: who teaches these students in

> their early years? Our alumni. We teach the teachers so we are at fault (Eddy, 1982, 20).

Issues

There are two areas of concern regarding teacher preparation programs: first, the capability of students entering the program; second, the quality of the academic and field experiences provided in the professional core of courses. The reason for considering the capabilities of entering students is to increase the probability that those who are admitted will successfully complete the program and become effective professionals. While there is no guarantee that those selected into other professional programs will become competent physicians, dentists, or lawyers, few would want admission standards to those programs lowered or terminated. In addition, research has shown that "teachers identified as successful earned higher grades in college . . . (and) that superior teachers are more intelligent, well informed, and able to communicate effectively" (Watts, 1980, 121). Preliminary data from Florida and Georgia indicate that more stringent standards established for new teachers have resulted in higher student achievement (Stoltz, 1981, 13).

Thus, though the number of students enrolling in teacher preparation programs is declining, the SREB Task Force and other educators are recommending more selective admission requirements to these programs. Those who answered the Higher Education Survey selected the following as the most appropriate admission standards for teacher preparation programs:

1. Require demonstration of good interpersonal skills and an interest in working with children or young people.
2. Require a minimum score on a standardized test.

3. Require a minimum grade point average for the first two years of undergraduate work.

In addition, 91 percent of the respondents agreed or strongly agreed that upon completion of their teacher preparation programs, students should pass a test which demonstrates their command of knowledge essential to teaching in their area of certification.

The SREB Task Force was critical of the quality of teacher education programs. It found: "(T)he prevalent lack of communication in most institutions between the arts and science faculty and the teacher education faculty is deplorable, especially since it is weakness in the general education or content component of a teacher's preparation that causes most failures on teacher certification tests" (1981, 8). A second criticism was that the student teaching experience was often perfunctory, with the cooperating/master teacher providing inadequate feedback to the student and having even less contact with the student's college instructors.

Master Teacher Concept

The master teacher concept, as proposed here, is unique to Tennessee. Other states, Georgia, Mississippi, and North Carolina, have recognized the need for a master teacher in each school but have not, as yet, established that teacher rank. The master teacher concept is predicated upon one of the oldest teaching methods--apprenticeship. Since ancient times serving under the tutelage of the master has ensured that the intricacies of performing a skill well would be transmitted from one generation to the next. Today skilled laborers hold the apprenticeship position in high regard, realizing the techniques of their trade will only be advanced by those who are instructed over months or years by a master craftsman.

In addition, the master teacher concept has been developed to: (1) provide a way to recognize the superior teacher, and (2) retain the superior teacher in the classroom. For too long in education the only way excellent teachers with drive and ambition could improve their job status was to move out of the classroom and into an administrative position. The master teacher rank creates a new position for teachers at the teaching level.

The master teacher is that individual recognized by peers and principal as a superior instructor. It is the individual who thinks of innovative ways to present material to students and delights in sharing those skills with fellow teachers. It is the individual who respects students and has their respect. It is the individual who takes time, is concerned, and considers what motivating factors in creating classroom experiences would be in the best interests of students. It is the individual who works well with peers and supports the philosophy of the school.

The master teacher is selected by peers and principal to serve in that position for the school. In that capacity the master teacher works both with cooperating teachers and newly hired teachers. The master teacher is responsible for aiding these apprentices in:

1. organizing instruction
2. applying appropriate inquiry strategies to individual diagnosis and instructional design
3. developing and evaluating activities of teaching units
4. working through problem situations
5. working with cooperating teachers as they prepare student teachers for temporary certification
6. recommending approval of new teachers for permanent certification.

It is also the master teacher's responsibility to stay abreast of instructional research and development, such as

1. different instructional approaches, including use of existing and emerging media
2. the relationship between diverse characteristics of learners and instructional strategies
3. curriculum and evaluation models.

This information is shared with the school's staff on an individual and inservice basis.

The master teacher serves both the school and the profession and should be remunerated as such. With the rank of master teacher comes an additional salary bonus which is paid each year the rank is held. To be of most service to the school, the master teacher serves only one school. If the position is turned into a system-wide position with the master teacher working among a number of schools, continuity is lost and faculty at the individual school is not enriched. The master teacher should be provided release time, possibly carrying only one or two classes a day, depending upon the number of new and student teachers in the building. A large school may have a number of master teachers. This would be determined by a school's enrollment and the number of student teacher and new teacher positions.

The primary objective of the master teacher concept is to provide teacher candidates with as much personal support and skill direction as possible. A second objective is to give an additional incentive to established teachers to continue to improve their skills to earn the rank of master teacher. The recognition of this rank enhances the teaching profession and aids in the development of teaching professionals.

In addition to recognizing the need for an apprenticeship experience, the SREB Task Force believed the actual classroom experience came much too late in the student's educational program. They suggested such experiences span the four-year undergraduate program and provide a wide variety of field-based classroom experiences. They also found that many of the program options were in unnecessary abundance with a particularly costly array of specialty offerings. These were thought to be a financial burden to many institutions. All of these quality issues were addressed in the recommendations process.

B. Institutional Quality

Background

Only recently has the quality issue become a primary concern in the higher education community. Prior to the accountability movement in the mid 1970s, those involved in higher education were comfortable referring to a recognized set of criteria believed to ensure the quality of an institution, including: "(1) proportion of faculty with the doctorate; (2) average compensation (salary and fringe benefits) per faculty member; (3) proportion of students continuing to graduate school; (4) proportion of graduate students; (5) number of volumes in the library per full-time student; (6) total number of full-time faculty; (7) faculty-student ratio; and (8) total current income per student" (Lawrence and Green, 1980, 32).

Lawrence and Green point out that like the higher education community, states also held to this traditional concept of institutional quality. In the postwar era of rapid expansion in higher education, "(T)he states purchased (or created) higher education facilities for the benefit of their citizens, and the states 'bought' the value system of the academic community" (Lawrence and Green, 47). This meant institutions sought students with high test scores, faculties with doctorates, publications, and research grants. Such commodities were held in high regard during an era when they were not in large supply. Thus, well endowed institutions could afford to be selective and earned reputations for quality based on quantitative factors.

Traditionally, these factors have been employed to rank graduate and professional school programs and, therefore, are not as adaptable in evaluating the unique experiences afforded students at diversified undergraduate institutions. Consequently, educators have continued to search for quality indicators which would adequately assess the merit of the undergraduate experience. For example, Krause and Krause assessed the educational quality of colleges in terms of the number of baccalaureate graduates who contributed articles to Scientific American between 1962 and 1967. Their findings indicated that smaller colleges were more effective in producing scientists. However, the study was faulted because there was no way to establish the emphasis placed on submitting articles to that particular journal by various institutions. Faculty at larger institutions may not have considered the journal a proper vehicle for student papers. In addition, this indicator was thought to be more appropriate for graduate students.

Studies that ranked institutions based on the number of students who continued their graduate or professional education (Dubé 1974, Tidball and Kistiakowsi 1976) were also criticized. Such criterion excludes those institutions which do not emphasize preparation for professional or graduate schools as a primary part of the undergraduate experience. As Astin points out, furthering one's education has as much to do with individual abilities and aspirations as with the impact of the undergraduate experience (1963).

The other recognized type of student achievement, accomplishments in later life, has also come to be discredited as an indicator of the educational quality of an institution. One reason is that by the time the graduate has become a recognized, accomplished member of society, appearing in Who's Who in America, for example, twenty to thirty years would have elapsed since the undergraduate experience. There is no way to ascertain whether the quality of the institution may have eroded over that period of time. In addition, there is no way to determine whether the institution's quality or the student's own abilities and experiences led to the distinguished recognition.

Astin has done several studies based on the college preferences of academically able students (1965, 1971, Astin and Henson 1977, Astin and Solmon 1979, 1981). His conclusion is that such studies best indicate the drawing power of an institution. That is, the selection of certain institutions by academically bright students, even over a period of time, indicates recognition of the institutions' perceived quality; it is not an assurance the institutions are providing a quality education for their clientele.

Another type of institutional ranking is the classification of institutions established by the Carnegie Commission in 1973 and revised in 1976. The classification was based on the amount of federal financial support an institution received and the number of doctoral degrees it awarded. Although the ranking is thought to be objective, clearly the most prestigious institutions are included in "Research Universities I" for graduate study and "Liberal Arts I" for undergraduate study. Nor does the classification allow for recognition of the diversity among postsecondary institutions.

In the section on the Higher Education Survey instrument asking participants to rank eleven indicators of institutional quality, the respondents overwhelmingly selected as a primary indicator, "leadership of the university in promoting academic excellence." Probably this was because it was the only qualitative statement included on the list. Other quality indicators chosen in descending order were: library holdings, admission standards, percentage of undergraduates accepted into graduate or professional schools, regional accreditation, student exit performances on standardized tests, alumni achievements, and expenditures per student.

Several of the selected indicators are related to the resources of the institution, i.e., library holdings, expenditures per student, and have been traditionally used as comparative factors to measure quality among all institutions. Only recently has the comparison of institutional resources been recognized as an insufficient measure of institutional quality. As Webster points out, knowing what resources are available to students is not the same thing as knowing how often or how beneficially students are using these resources (1981, 24). Thus, a true indicator of quality in higher education has come to focus on the development of students during their college experiences. "As more research is conducted on college impact . . . focusing on student growth or 'value added' as a major consensual goal . . . , the meaning of quality in undergraduate education will assume more appropriate scope and diversity than is possible from traditional approaches borrowed from studies of the graduate domain" (Lawrence and Green, 40-41).

Educational Quality in Tennessee

The Higher Education Subcommittee met several times with various representatives of Tennessee's higher education community to pursue the issue of quality and how postsecondary institutions achieve it. These educational leaders agreed that no single measure can be employed to measure the quality of an institution; consequently, several factors were suggested. For example, a number of external and internal benchmarks were proposed against which an institution's quality can be measured. The external benchmarks include:

1. reputation of the institution
2. accreditation of the institution by regional and nationally recognized agencies
3. performance of alumni as citizens and professionals, determined through survey sampling
4. knowledge that is generated through research and scholarship and is utilized in society, i.e., works of art or published books used at other institutions or found in major libraries
5. corporate citizenship of the institution in the community where it is located.

Internal benchmarks include:

1. institutional goals sufficiently comprehensive to provide scope for the institution and distinctive goals that help establish what the institution accomplishes best
2. programs where excellence is found
3. superior faculty and staff
4. strong admission standards, for students do not benefit when they are placed in a context of failure if they are admitted without the prerequisite academic skills
5. up-to-date facilities and equipment.

Some of these benchmarks represent traditional academic standards for measuring quality; however, that does not make them ineffective. For example, those attending college want to graduate from accredited programs, especially those that have made some contribution to a particular field. Nor is it unreasonable for students to want to continue their education under the tutelage of superior faculty in modern facilities with up-to-date equipment.

The less traditional quality indicators presented were establishing the strengths of an institution and determining where its programs of excellence are to be found. The educational leaders consulted suggested these indicators could be established through professional assessment, reputational recognition, and student performance. They indicated that much more work was being done in the area of student performance, and while current strategies were far from perfect, efforts were being made to better measure student accomplishment. Of particular concern is student accomplishment in the following areas:

1. the ability to communicate--to express one's thoughts clearly, both in speaking and in writing
2. the ability to create--to think up good ideas
3. the ability to criticize--to find the fallacies in poor ideas
4. the ability to analyze--to identify information needed and to arrive at a recommended course of action.

Suggested methods for evaluating student performance included pretests and post tests as well as continuous evaluation throughout the college experience, additional performance on standardized tests and on state board exams, and employer satisfaction with the graduate's performance.

Strongly recommended was the strengthening of admission criteria for the student's benefit and to maintain program quality. Respondents to the Higher Education Survey also designated selective admission standards and intellectually rigorous academic programs as appropriate indicators of educational quality.

Student Access

When selective admission standards and strong academic programs are suggested as indicators of educational quality the issue of student access is raised. The prevailing attitude is that every individual who desires further education should have access to postsecondary programs but not every individual would necessarily pursue a four-year degree. We are fortunate in Tennessee to have strong college and university systems which provide a wide variety of educational opportunities to meet the diverse needs of our citizens. The community colleges and technical institutes, by and large, serve a different clientele and provide different educational opportunities from those offered at the regional and research universities. Such diversity enhances the quality of education in Tennessee, for all four types of institutions strive to:

1. establish a reputation for excellence in their own program strengths
2. obtain accreditation for these programs from regional and professional agencies
3. serve the community where located
4. attract and retain superior faculty and staff
5. attract or develop academically capable students for their particular programs of excellence
6. provide educational experiences in modern facilities with up-to-date equipment.

Thus, the quest for institutional quality is not that different, rather it is achieved in different ways. Institutions are recognized as providing educational quality when they enhance the achievement of academically less able students as well as more academically capable students. Because the various institutions serve different constituencies with different program offerings, quality measures must be appropriate to individual institutional goals and objectives.

V. FUNDING HIGHER EDUCATION

Background

Fiscal stringency has been a way of life for most of higher education through the 1970s into the 1980s. Struggles to provide quality education with less real dollars have been well documented in the literature (Bowen and Glenny 1980, Bowen 1981, Carnegie Foundation for the Advancement of Teaching 1976, Education Commission of the States 1979, Hyde 1981, Mingle 1981, Minter and Bowen 1980, 1982, Southern Regional Education Board (SREB) 1982). One of the latest of these, the Minter, Bowen report, indicates that though the 1970s and 80s have been a time of financial squeeze, higher education institutions have been surprisingly tenacious. In evaluating these economically stringent times, the authors have noted three disturbing economic trends occurring at higher education institutions: (1) a decrease in expenditures for instruction, i.e., teaching, research, and faculty salaries, (2) a backlog of deferred maintenance for buildings, grounds, and equipment, and (3) an increase in expenditures for institutional support, i.e., administrative costs. Such realities, they believe, indicate continued financial stringency; therefore, they suggest, ". . . the leaders of our society would be well advised to exercise care in the treatment of higher education over the next several years. Our colleges and universities are vulnerable" (Part IV, 1982, 9).

An example of this vulnerability occurred in Tennessee in 1980 when the state faced a revenue shortfall which required a $35 million mid-year budget adjustment. Higher education's share of the budget cuts to make this readjustment was $13.6 million. It must be noted that higher education appropriations only represent approximately 18 percent of the state's expenditures; however, this budget cut made higher education's share of the budget cutbacks close to 40 percent of the total readjustment level. To save the $13.6 million each public postsecondary institution was requested to make a five percent cut in its state appropriation. Such an across-the-board cut assumes all institutions are the same and can equally bear such a funding cutback. No consideration was given regarding changed institutional circumstances since the fall budget had been formulated, such as institutional enrollment growth or decline, or the abilities of larger institutions to absorb the cutbacks as opposed to smaller ones. As the SREB points out, "State and institutional actions to deal with sudden mid-year revenue shortfalls will seldom be more than patchwork" (1982, 11).

Such funding cuts coupled with inflation have strongly impacted on two areas of the higher education community, faculty salaries and what Minter and Bowen refer to as the "intangibles." Their study and others reveal that:

> The students were educated, research and public service responsibilities were carried out, and most institutions could look back with some frustration but also pride on the late 1970s and early 1980s as a time of considerable achievement.
>
> That achievement, however, came to a large extent out of the hides of the faculty members (Minter, Bowen, 1982, Part II).

As Mingle points out, "Report after report in recent years demonstrates that faculty salaries have not kept pace with inflation. . . . Few employee groups in the labor sector have a worse record of decreased earnings as measured in real income than the one experienced by faculty; and since spending for salaries typically reflects 75 percent of all higher education spending, the end result is that higher education generally has not maintained its share of state revenues" (1981, 254-255).

Economic Factors

In discussing the funding of higher education in Tennessee, several economic factors must be considered. These include: the state's revenue growth pattern, revenue allocations, projected enrollment growth, and projected costs for educational services provided.

Observing the realities of the state's revenue growth over the past few years establishes the economic framework within which all public education as well as other state services must be funded. For example, it should be noted that the total revenue from taxes collected in Tennessee from 1977 to 1980 actually lost 2.5 percent while the real dollar tax capacity fell 6 percent during this same time span. Thus, the state's economic growth has not resulted in an equal or greater increase in tax revenues.

Another factor affecting higher education funding is the allocation of state revenues. A comparison between Tennessee's General Fund disbursements for fiscal 1970-71 and 1980-81 for public education indicates that in relative terms revenues going to education declined from 54.9 percent in 1970-71 to 47.2 percent in 1980-81 (Memphis State University, 1982, 5). In addition, although state appropriations increased for higher education 62 percent from 1977 to 1982, when inflation and the growth of enrollment are considered, the increase represents only about 5 percent per full-time student. However, "(T)he division of total appropriations by the number of full-time students enrolled is misleading because certain nonformula items (such as retirement and social security) increased rapidly. If only the academic units are considered, student appropriations went down 4 percent during the last five-year period" (Folger, 1982, 17). Fortunately, when considering the future, the inflation rate, as measured by the gross national product deflator, is expected to fall slowly over the remainder of the decade, stabilizing at a little above 7.0 percent by the decade's end (Fox, 1982, 7). This factor coupled with a stable or minimal enrollment growth may aid in improving higher education's financial future.

To determine future funding needs in higher education, the following enrollment projections have been developed by the Tennessee Higher Education Commission (THEC) with two different assumptions:

Projected Series A: No enrollment limitations

Projected Series B: Enrollment limitations including elevated admission standards, see the following table.

These are only projections, however, and it should be noted that enrollment fluctuations are influenced by the economy as much as by the number of 18 to 24-year olds projected for a given year. When the economy takes a downward swing, for example, generally enrollments at public institutions increase. There are several reasons for this: (1) individuals who cannot find employment return to college for further skill building or retraining, and (2) individuals who plan to attend private institutions find them too costly and enter public institutions. In addition, nontraditional students courted by colleges and universities in the 1960s and 70s are becoming more comfortable seeking postsecondary opportunities and, thus, continue to enter colleges in increasing numbers. It should also be noted that although full-time

HIGHER EDUCATION
ENROLLMENT
1961-1981 AND PROJECTIONS 1982-1990

	Scholastic Year Ending June 30 of:	Total State-Wide	SBR/UT Systems	Technical Institutes
Actual	1961	35,332	35,332	-
	1962	40,244	40,244	-
	1963	42,535	42,535	-
	1964	46,547	46,547	-
	1965	55,447	55,447	-
	1966	63,000	63,000	-
	1967	69,244	68,627	617
	1968	75,806	74,990	816
	1969	82,604	80,443	2,161
	1970	91,106	88,791	2,315
	1971	98,464	95,217	3,247
	1972	104,526	101,183	3,343
	1973	111,743	106,356	5,387
	1974	118,028	113,186	4,842
	1975	125,726	119,451	6,275
	1976	139,528	132,590	6,938
	1977	140,544	132,446	8,098
	1978	146,309	135,879	10,430
	1979	150,109	138,255	11,854
	1980	154,503	140,612	13,891
	1981	157,312	141,705	15,607
Projected (Series A)	1982	153,460	137,092	16,368
	1983	156,246	139,246	17,000
	1984	158,086	140,086	18,000
	1985	160,310	141,310	19,000
	1986	162,010	142,010	20,000
	1987	161,010	140,410	20,600
	1988	161,810	140,310	21,500
	1989	161,710	139,610	22,100
	1990	161,710	139,210	22,500
	1991	160,910	137,810	23,100
Projected (Series B)	1982	153,460	137,092	16,368
	1983	152,197	135,797	16,400
	1984	149,788	133,388	16,400
	1985	147,695	131,295	16,400
	1986	144,778	128,378	16,400
	1987	143,030	126,630	16,400
	1988	142,362	125,962	16,400
	1989	141,462	125,062	16,400
	1990	141,062	124,662	16,400
	1991	139,562	123,162	16,400

SOURCE: Tennessee Higher Education Commission student enrollment is projected to remain relatively stable, or possibly decrease slightly, 2 percent by 1990, it could just as easily be up or down 10 percent depending on other economic conditions (Folger, 18). In addition, student clientele has changed over the decade; by and large, it has been less academically proficient and is much more career oriented providing new challenges to the higher education community.

A final economic factor to be considered in financing public higher education in Tennessee is the projected costs for educational services. To keep higher education competitive and on a par with other southern institutions, the THEC has recommended that Tennessee's institutional academic units receive increased financial support to bring them up to the southern regional average over the next five years. This would mean that expenditures per full-time student should rise during the 1980s at rates above those maintained for the last five-year period. Such a goal represents an expenditure, after adjustment for inflation, of 7.34 percent across-the-board per full-time student (Folger, Appendix A). Although this parity may not be reached, it is a recognized goal for higher education in Tennessee.

Economic Options

Although current fiscal restraints are disquieting, many in the higher education community regard this period as an opportunity to focus on improving the quality of the delivery of educational offerings, as well as developing ways to meet the expanding educational needs of a technological society. To achieve this goal, however, there will have to be changes in current funding procedures. Those in agencies concerned with the effective and efficient management of higher education explain: "Budgeting practices and funding formulas applicable during periods of growth have been found to be a hinderance to effective management during periods of decline" (SREB, 1982, 3); " . . . there will be a need for new procedures for effective planning, new budget processes including reallocation of resources and more effective ways of state review not only of new but existing programs and institutions" (Education Commission of the States, 1979, 50). Such statements suggest there are at least three options that could be considered to improve the financing of higher education in Tennessee: (1) a tuition increase, (2) a change in the method of formula funding, and (3) funding centers for excellence.

1. Tuition Increase

Obvious nonstate revenue sources for higher education include: raising tuition and fees, increased gift giving, increased federal or local government funding, or increased income from charges for provided goods and services. Currently funding for Tennessee higher education is comprised of 62 percent from state appropriations, 29 percent comes from student tuition and fees, and 9 percent from other sources such as federal funds and gift giving. During the last five years, tuition as a revenue source has increased only 1 percent while revenue from other sources has increased 3 percent, rising from 6 to 9 percent of the total amount. When considering SREB tuition and fee charges for 1981-82, Tennessee ranked eighth out of fourteen states for student charges at large doctoral and master degree granting institutions, ninth for student charges at small doctoral institutions, and sixth for student charges at community colleges and technical institutes. Tennessee's current tuition policy is that it increases as appropriations increase. Thus, if there are no increases in projected revenue, tuition in terms of real dollars declines.

Consequently, the state may consider setting tuition in relation to: (1) a percentage of the funds needed for the operation of the institutions, and (2) a percentage of family income in the state. It should be noted that because of the rapid increases in federal aid to students in the 1970s, the net cost of college (tuition minus student aid) to students rose more slowly than family income or state appropriations (Folger, 20). Folger suggests possible tuition fee levels be raised over the decade to 40 to 50 percent of the state appropriations for the universities and 30 to 40 percent of the state appropriations for the two-year institutions. If this policy were adopted, the state would need to consider providing additional student assistance in the form of loans or work study opportunities to assure access for the less economically able.

2. Formula Funding

The current funding formula has been designed to equitably distribute state funds to its higher education institutions. Over the years it has been restructured, stretched, and amended to meet the funding differences of the state's varied postsecondary institutions. In working toward meeting the complex needs of such funding, the formula has had to become complex, compounding the frustration of inadequate state funding for higher education. In response to the charge to lessen the current formula's complexity and to move away from its historic cost basis, three options are offered.

Option A--Full-time Student Appropriations

In this funding situation each institution would be funded in terms of a base allocation. The base would be determined by the SREB average full-time student appropriation of similar institutional type, i.e., large doctoral, small doctoral, masters, community college. Thus, the only formula determination would be this average cost multiplied by the current enrollment, plus or minus a 2 percent enrollment range. Institutions would receive this base appropriation each year and would be eligible to have it redesignated due to:

1. inflation adjustment
2. substantial changes in role and mission of an institution, for example, the addition or subtraction of a professional school
3. substantial enrollment fluctuations, plus or minus 4 percent.

Advantages to this system are:

1. It is a very simple procedure.
2. It moves away from historic costs, relying on regional expenditures per student.
3. It meets the higher education leadership goal of achieving SREB funding levels.

Disadvantages are:

1. It may not adequately meet some of the unique functions of the various institutions.
2. It tends to maintain the status quo.
3. It is enrollment driven.
4. It does not directly provide quality incentives.

Option B--Instructional Appropriations

In this funding situation the initial assumption is that there is an overall acceptable ratio of students to faculty, i.e., one faculty member for every nineteen full-time students at all types of institutions. This ratio generates a faculty unit that delivers instruction and public service through instruction. Then SREB faculty salary averages are used to calculate institutional appropriations. That is, the number of faculty needed based on the number of full-time students is multiplied by the average faculty salary of the similar type of SREB institution to arrive at a base figure which is then multiplied by 1.7. This average multiplier has been computed by SREB institutions to determine funds for educational and general support of the institution, i.e., academic support, institutional support, and student services. An additional 3 percent of total instructional costs is added to university budgets for research allocations. A deduction is made for tuition and fees to determine the state funds necessary for each institution's academic formula units. Advantages to this system are:

1. It is less complex than the current formula structure.
2. It moves away from historic costs.
3. It enhances instructional salaries, ensuring competition with SREB states.
4. It places strong emphasis on an institution's primary function, instruction.

Disadvantages are:

1. It is enrollment driven.
2. It does not directly provide quality incentives.

Option C--Optimum Enrollment Appropriations

In this funding situation each institution would be funded in terms of a base allocation. The base would be established by determining the optimum number of students for each postsecondary institution. This number would then be multiplied by SREB average full-time student appropriations of similar institutional type. If institutions enrolled more students than the optimum number agreed upon, they would be funded at a lesser percent for those additional students. The advantages to this system are:

1. It greatly simplifies the formula process.
2. It moves away from historic costs, relying on regional expenditures per student.
3. It meets the higher education leadership goal of achieving SREB funding levels.

The disadvantages are:

1. It is enrollment driven.
2. It does not directly provide quality incentives.

3. Centers for Excellence

Throughout 1979-80, under the direction of James Mingle, the SREB conducted a broad-based research project to determine what strategies higher education institutions were employing to deal with the effects of fiscal restraint. The findings indicated that those higher education institutions or systems which have successfully dealt with financial cutbacks were utilizing a process which funded new growth through internal reallocations of resources. This process involves institutional administrators and faculty in assessing program priorities and qualities. Together they may consider such criteria as "(1) centrality of the program to the mission of the university, (2) overall quality of faculty and curriculum, and (3) extent of future demand for students, research, and service in the area" (Mingle, 1981, 83). Such criteria enable institutional personnel to determine their established centers of excellence and consider program priorities. The focus is on enhancement of quality in areas of strength.

To enable institutions to capitalize on their centers of excellence two approaches are suggested. First, as institutions make program determinations, allow them to maintain the same funding levels even as marginal programs are being phased out. The funds that are generated by program reduction are to be committed to the institution's centers of excellence for further strengthening of these programs in whatever ways deemed necessary, i. e., faculty merit incentives, recruiting of academically excellent students, furthering of research provisions. Second, competitive funds be provided to encourage institutions to develop innovative concepts, improve student learning, and further enhance such centers. Through both of these funding techniques, institutions are encouraged to determine what it is that they do best and pursue further enhancing their centers for educational excellence. The competitive monies encourage the institution to ascertain first its areas of excellence, then validate in what ways such excellence exists, and how it may be further enhanced. Recognition of centers for excellence is a positive method for achieving quality in higher education.

RECOMMENDATIONS ADOPTED BY THE HIGHER EDUCATION SUBCOMMITTEE

Based on the research presented here, as well as numerous conversations with leaders of the higher education community, the Higher Education Subcommittee adopted the following recommendations.

I. GOALS

Short-Term

Statewide Goals. The higher education community should adopt the following nine (9) goals as the Goals for Higher Education. These goals would replace the five (5) goals suggested by the Tennessee Higher Education Commission in its 1979-84 master plan. The goals are:

1. Develop and maintain quality programs in instruction, research, and service.
2. Provide educational opportunities for all citizens who have the ability and interest to attend college.
3. Provide training that will aid in suitable employment.
4. Provide instruction and experiences that develop students' awareness of their own physical and intellectual capacities.
5. Encourage the pursuit of lifelong learning.
6. Provide instruction and experiences that develop students' personal value standards and ability to evaluate alternatives.
7. Provide instruction and experiences that develop students' understanding of society and the responsibility of the individual within it.

8. Provide instruction and experiences that develop abilities of judgment and preference.
9. Provide those programs that are responsive to current needs and plan for future program and service needs.

II. GOVERNANCE

Governance. No governance recommendation need be made as the Vocational-Technical Education Subcommittee has studied this subject in-depth and will be making its recommendation to the Coordinating Committee.

III. TEACHER PREPARATION PROGRAMS

Short-Term

Standards

1. Upon completion of the professional core, students should pass the Specialty Area Exam of the National Teachers' Exam to demonstrate their command of knowledge essential to teaching in their certification area, as well as passing the Core Battery.
2. Admission requirements to teacher preparation programs are to include requiring a grade point average of 2.5 on a 4.0 scale for the first two years of undergraduate work and the achievement of a passing score on Form 19 of the California Achievement Test, which is to be supplemented by requiring a written composition.
3. The professional core should provide additional exposure to a variety of field-based classroom experiences.

4. The appropriate governing boards should establish ongoing evaluations of teacher education programs.
5. The appropriate governing boards should assess the need for and the quality and productivity of all teacher preparation programs and specialties, eliminating unnecessary duplication.

Long-Term

Master Teacher

1. The appropriate educational boards should encourage local schools to establish the rank of Master Teacher to act as a mentor for new and student teachers.
2. Teacher education personnel should work with local master teachers to provide inservice programs that enhance current teachers' skills.
3. As the master teacher concept is implemented, new teachers would be certified only after demonstrating their teaching competence during a year's internship with a master teacher.

Short-Term

Funding

1. Incentives should be established to attract science and mathematics teachers such as scholarships or loans which would be forgiven over a three-to five-year period during which the teacher taught mathematics or science in the state.

2. Incentives should be established for doctoral students in mathematics or science such as scholarships or loans which would be forgiven over a period of time while the candidate taught undergraduate students in either discipline in the state.
3. A standard monetary incentive should be provided to attract competent cooperating teachers for student teachers.
4. Additional salary monies should be provided for outstanding teachers at all levels to make the profession more competitive in the market place.

Long-Term

Funding. Incentive monies should be provided for those who earn the rank of Master Teacher to be allocated on a yearly basis over and above the regularly earned salary.

Short-Term

Certification. Certification requirements should be established to accommodate teachers in related surplus fields by issuing temporary endorsements to teach mathematics and science with the understanding that a specified number of refresher courses would be taken within a year.

IV. EDUCATIONAL QUALITY

Short-Term

Mission

1. The appropriate governing boards should encourage institutions to fulfill their particular missions by overseeing admission standards and program offerings within the following parameters.

   Community Colleges provide:

   a. college transfer programs

   b. one and two-year degree programs, primarily in technical fields, no junior or senior level programs are to be offered

   c. open admissions for those with a high school diploma or general equivalency degree, particular programs within the college are expected to have admission standards

   d. strong remediation programs for the less academically prepared, remediation is to be completed in the student's first year of college work and is not to be taken for college credit

   e. non-credit continuing education programs designed to meet the needs of the community and business and industry.

   Technical Institutes provide:

   a. open admissions for those with a high school diploma or general equivalency degree, particular programs within the institute are expected to have admission standards

   b. only one or two-year degree programs in technical fields, no junior or senior level programs are to be offered

c. technical training programs to meet the needs of business and industry.

Four-year institutions provide:

a. selective admission standards ensuring educational opportunities for academically well-prepared, remediation will be reduced as a long-range goal

b. four-year degree programs, masters, and doctoral as designated, one or two-year degree programs are offered as deemed necessary

c. opportunities for research related to designated programs of excellence

d. continuing education programs as related to community needs.

2. The appropriate governing boards should aid institutions in establishing optimum enrollment levels.

Short-Term

Quality

1. The appropriate governing boards should aid institutions in establishing admission standards for technical and professional programs.
2. The appropriate governing boards should aid institutions in developing ways to assess student outcomes, such as, student academic gains, student satisfaction with the educational experience, employer satisfaction with graduates, which would be applicable to individual programs within institutions.
3. The appropriate governing boards should be responsible for institutional program review on a regular basis.

4. Postsecondary institutions should incorporate into their admission criteria the basic academic competencies expected of entering students and articulate these expectations to the secondary schools.
5. Postsecondary institutions should improve their retention strategies.
6. Postsecondary institutions should restrict enrollments once optimum enrollment levels, as approved by the appropriate governing boards, have been reached.
7. Postsecondary institutions should determine their particular programs of excellence and focus on maintaining if not enhancing such excellence.
8. An incentive fund should be established for postsecondary institutions to receive additional monies for their centers of excellence.

V. FUNDING

Short-Term

The overall ratio of tuition to state appropriations should be maintained at 30 percent tuition to 70 percent state appropriations.

Formula. The respective governing boards for postsecondary institutions should meet with the Tennessee Higher Education Commission (THEC) to discuss three alternatives to the formula, including: (1) slightly modify the current formula, including using SREB funding averages as the formula base, (2) use the ideal number of faculty per full-time student enrollment as an appropriations base incorporating the average SREB faculty salary, and (3) establish the optimum number of full-time students at each institution and base appropriations on SREB per full-time student expenditure. The THEC is to report the results of these discussions to the House and Senate Education Committees on April 1, 1983.

Long-Term

Formula. The higher education leadership should make a commitment to reach SREB funding averages.

CHAPTER SEVEN

PROFESSIONAL SCHOOLS

I. INTRODUCTION

Graduate and professional education in the Southern Region has experienced rapid growth during the last fifteen years. The significant growth of professional education, with the impetus from federal funds, occurred in a more orderly fashion than growth in graduate education. The current state of fiscal constraint with the reduction of federal funds demands an examination of professional schools plus a review of present and projected costs. Long-range public interest in these conditions requires careful evaluation, selective retrenchment, protection of quality, and planned control of future growth (SREB, 1976, 19, 20). In addition, the competition among the various state agencies for limited resources compels careful study and sound financial planning. Bruno Boley, author of Crossfire in Professional Education, stated, "the needs of education for professional practice must be balanced with those directed toward the general education of the students; the consequent conflict raises obvious questions of allocation of resources" (Boley, 1977, vii).

The Professional Schools Subcommittee selected medicine, dentistry, law, and veterinary medicine as the public professional schools to be reviewed. The Subcommittee's desire to provide for the needed professional manpower in Tennessee was tempered with the recognition of the high educational cost inherent in these professional schools. Also identified was the consideration of quality indicators within each professional school.

The public professional schools reviewed in the University of Tennessee System included the College of Medicine, the College of Dentistry, the College of Veterinary Medicine, and the College of Law. The public professional schools reviewed in the State University and Community College System included the Memphis State University School of Law and the East Tennessee State University College of Medicine.

II. QUALITY INDICATORS

During the past two decades, different areas of interest have influenced policies and practices in institutions of higher education. Higher education moved from an emphasis on excellence in the early 1960s, to that of access later in the same decade, to equality in the 1970s, to the present area of emphasis on quality. With the prospect of fewer students and reduced financial support, governing boards of higher education have been reviewing curriculum, and individual institutions have started procedures to ascertain quality of the educational experience (Kuh, 1981, 1).

Quality Definition

In the past, the quality of graduate and professional programs has included three interpretations. A program was considered of high quality if it had a better reputational rating than other programs in the same field, if the program met accreditation standards, or if it accomplished its stated purpose (Kartz and Hartnett, 1976, 85). Pace believes that another valuable component that indicates quality in higher education is demonstrated by alumni performance after graduation. Ideally, he suggests that a set of instruments be utilized in an alumni follow-up study during a longitudinal period of ten to fifteen to twenty years (Pace, 1979, 111, 112, 113). The actual time required and the possibility of program deterioration limit the feasibility of this approach. Two additional dimensions of quality identified in another study were the scholarly excellence of the faculty and its commitment to teaching (Astin and Solmon, 1981,15). Other findings indicate that among the top institutions (graduate, professional, or undergraduate), there is a strong correlation between material and human resources and reputational prestige. However, this observation is not sufficient to assess the varied higher education spectrum, especially in the case of smaller quality institutions or programs. "The meaning of 'quality' is--and should be--as varied as the purposes behind an assessment, the measurement criteria used, and the group or groups conducting the assessment; herein lie the value and limitations of quality assessments" (Lawrence and Green, 1980, 2,3).

Quality Assessment

Webster indicates the factors to consider in the assessment of higher educational quality are reputational rankings, faculty awards, faculty citations, student achievement in later life, student test scores, and institutional resources (Webster, 1981, 20-14). Lawrence and Green advance the idea that education needs to devise a new, simpler approach to quality measurement which would encompass value-added evidence. Each institution or school could initiate a well-defined process of assessment which leads to the improvement of educational quality for students (Astin, 1982, 13). Kuh defines the quantitative method (objective measures that can be computed and compared), the qualitative approaches (subjective perceptions of quality by educators and students), and the holistic perspective (using several forms of data gathering) as appropriate classifications for quality inquiry (1981, 8, 9).

The purpose of this review is to ascertain indications of quality in the four professional education areas in Tennessee. The quality indicators investigated included information concerning the qualifications of entering students, student outcome as evidenced by performance on certain required examinations, an opportunity for interaction between students and faculty as indicated by the student-faculty ratio, faculty citations and ability to attract research funds, and the accreditation status of the professional schools.

Tennessee Public Medical Education

The quality indicators reviewed at the East Tennessee State University College of Medicine and at the University of Tennessee College of Medicine were primarily quantitative in nature. The investigation focused upon student information, faculty information, and accreditation. A three-year composite of student entrance exam results, grade point averages, and national board results was collected. The faculty quantitative measures included faculty to student ratios, faculty publications, and research funds awarded to faculty members. The accreditation report by the Liaison Committee on Medical Education, which represents the American Medical Association and the Association of American Medical Colleges, was utilized as an external indication of quality.

The following table graphically displays the information gathered for the identified quality indicators. Based upon the measures investigated, the indication of quality within both public medical schools is quite positive. In terms of the student measures displayed, University of Tennessee students slightly exceed national averages, and in most cases East Tennessee State University student averages are near national averages.

MEDICAL EDUCATION

A. STUDENT INFORMATION

ENTRANCE MEASURES

	MCAT			Overall G.P.A.		
Year	E.T.S.U. Average	U.T. Average	National Average	E.T.S.U. Average	U.T. Average	National Average
1979	9.33	9.5	9.42	3.45	3.56	3.51
1980	8.64	9.3	9.3	3.51	3.5	3.51
1981	8.52	9.5	9.43	3.32	3.5	3.50

NATIONAL BOARD SCORES*

	E.T.S.U. Averages				U.T. Averages			
Year	Part 1	% Passed	Part 2	% Passed	Part 1	% Passed	Part 2	% Passed
1979	n.a.		n.a.		479.5		472.4	
1980	434		n.a.		500.8		505.2	
1981	494		471		534.9		500	
1982	460	76	509.5	95.7	511.8	93.4	517.9	100

*National Average is 500 on each part.

B. FACULTY INFORMATION (1981-82)

	E.T.S.U.	U.T.
Full-time Faculty Positions	95	300
Faculty : Student Ratio	1:1.6	1:3.2
Faculty Publications	65	482
Faculty Research Funds Attracted	$1,524,523	$8,023,301

C. ACCREDITATION

The Liaison Committee on Medical Education conferred full accreditation for one year to the Quillen-Dishner College of Medicine of East Tennessee State University in February, 1982. The Committee will again survey the program during the 1982-83 academic year. The initial findings in the 1981-82 review approved an entering class of 48 students rather than the requested number of 72, after considering the size of enrollment in each class and the total resources of the institution. Following an appeal of this entering class number, the Committee increased the number from 48 to 54 students. The Committee pointed out desired improvements in the areas of physical facilities, assurance of future funding, and level of student performance on external evaluations.

The Liaison Committee on Medical Education conferred full accreditation for six years to the College of Medicine of the University of Tennessee in June, 1980. The Committee recognized desired improvements in the areas of facilities and personnel practices.

Tennessee Public Dental Education

The review of the University of Tennessee College of Dentistry quality indicators included a three-year examination of student entrance exam scores, grade point averages of accepted students, and student results on the national board exams. Other quantitative measures examined were the faculty-student ratio, faculty publications, and research funds attracted during a one-year period. The report of the Commission on Accreditation of Dental and Dental Auxiliary Education Programs was utilized as an external indication of quality.

The following table graphically displays the selected quality indicators and portrays a positive image when compared to national averages.

DENTAL EDUCATION

A. STUDENT INFORMATION

ENTRANCE MEASURES

	DAT*		OVERALL G.P.A.
Year	Academic Average	Perceptual Ability	U.T. Average
1979	5	5	3.19
1980	5	5	3.21
1981	4	5	3.18

*The score of 4 is the national average for each subtest.

NATIONAL BOARD SCORES

Year	Part 1	Part 2	National Average	% Passed Part 2
1979	85.17	83.93	85	98.75
1980	85.12	85.05	85	100
1981	84.42	84.41	85	99.32

B. FACULTY INFORMATION (1981-82)

Full-time Faculty Positions	101.8
Faculty : Student Ratio	1:5.72
Faculty Publications	89
Research Funds Attracted	20,707.00
Instructional Grants Attracted	$762,735.00

C. ACCREDITATION

The Commission on Accreditation of Dental and Dental Auxiliary Programs in May of 1979 determined the status of each program being evaluated at the University of Tennessee College of Dentistry as approved. The duration of the accreditation status will be for seven years with yearly progress reports required. Two areas recommended for future emphasis are the securing of additional state support and improving the record of research by the dental faculty.

Tennessee Public Veterinary Medicine

Indication of quality in the University of Tennessee College of Veterinary Medicine included several varied quantitative measures. A three-year review of student performance on the admission test, of entering student grade point averages, and the results of the State Board Exam were assimilated. Also, statistics regarding the number of full-time faculty positions, the faculty-student ratio, the research funds attracted, and the number of faculty publications during 1981-82 were compiled. The accreditation evaluation by the American Veterinary Medical Association was utilized as an external indication of quality. The following table displays the breakdown of student, faculty, and accrediting information.

VETERINARY MEDICINE EDUCATION

A. STUDENT INFORMATION

ENTRANCE MEASURES

	VAT		OVERALL G.P.A.
Year	U.T. Average	National Average	U.T.
1979	161	155.94	3.44
1980	165	153.45	3.47
1981	159	155.98	3.42

STATE BOARD EXAM

Year	Total Applied	Total Passed	U.T. Applied	U.T. Passed	%
1979	115	109	30	29	96.7
1980	115	106	53	53	100
1981	109	96	60	60	100

B. FACULTY INFORMATION

Full-time Faculty Positions	68.8
Faculty : Student Ratio	1:2.6
Faculty Publications (1981-82)	85
Research Funds Attracted	$569,707

C. ACCREDITATION

The American Veterinary Medical Association Council on Education classified the University of Tennessee College of Veterinary Medicine as "Full Accreditation" status in April, 1979, for seven years. The report indicated the need for increased emphasis on food animal medicine and on research and graduate programs.

Tennessee Public Legal Education

Following the format utilized for the three previous professional school sections, a quality review of the Memphis State University School of Law and the University of Tennessee College of Law was conducted. The areas of student information and faculty information were examined by using a number of selected quantitative measures. External evaluations performed by the American Bar Association and the Association of American Law Schools were also reviewed.

The following table graphically depicts the information gathered. Based upon the quantitative measures displayed, students from both law schools tend to score within acceptable limits with the University of Tennessee students as a group scoring quite well.

A. STUDENT INFORMATION

ENTRANCE MEASURES

	LSAT			OVERALL G.P.A.	
Year	M.S.U. Average	U.T. Average	National Average	M.S.U. Average	U.T. Average
1979	533	578	532	3.18	3.30
1980	534	577	537	3.08	3.31
1981	546	574	538	3.11	3.33

BAR EXAM

Year	M.S. Total % Passed	U.T. Total % Passed	State % Passed	
			Feb	July
1979	79.2	94	74.7	72.9
1980	73.8	95	81	74.8
1981	85.4	98	72.6	86.5

B. FACULTY INFORMATION (1981-82)

	M.S.U.	U.T.
Full-time Faculty Positions	19	26
Faculty : Student Ratio	1:26.5	1:23
Faculty Publications	14	20
Research Funds Attracted	No Outside Funds	$9,850

C. ACCREDITATION

Memphis State University School of Law was reinspected in April, 1981, and remains on the list approved by the American Bar Association (ABA). The application for membership to the Association of American Law Schools (AALS) was not approved because of concerns regarding heavy teaching loads (see the previous table), the lack of challenge in some classroom teaching, and the amount of faculty research and publication. However, the report did indicate much progress has been recently accomplished in the improvement of the educational program. The University of Tennessee College of Law received continued approval status from the American Bar Association following the ABA/AALS inspection team visit in May, 1977, and received a letter of approval in July, 1978, for continued membership in the Association of American Law Schools. The inspection report indicated that despite great progress since 1970, improvement in the support for the faculty and the library were desirable.

III. FUNDING

The southern states have placed an extremely high priority on higher education to provide ample opportunities in professional education for their people. In the past, the South's share of the nation's first professional degrees has exceeded its share of all other advanced degrees; and presently, the Southern Region continues to produce a higher share of the nation's first professional degrees compared to doctorates awarded in the arts and sciences. When one considers the low per capita income in the South, and the fact that professional education is the most expensive component of the higher education establishment, the Region has clearly demonstrated its commitment to professional education (Galambos, 1978, 1).

The findings of a recent study of Tennessee medical education indicate that the total higher education appropriation increased from 7.7 percent in 1972-73 to 12.4 percent in 1977-78. By 1984 projected additional costs under present policies would be at least $8,000,000 for support of East Tennessee State University and $2,000,000 for the continued development of the family practice residency programs (THEC, 1978, 19, 20, 21). The cost differentials among different types of professional schools such as medical, dental, and veterinary medicine are great. For example, in the medical area, costs per student ranged nationally from $7,000 to $19,000 in 1973. A major determinant in the cost difference is the research focus of the particular school; increased emphasis results in higher educational costs. This factor seems to account for much of the difference in costs between medical, dental, veterinary, or law schools (Craig, 1979, 4, 7). In attempting to address the problem of escalating costs, Craig recommends the following measures:

1. Norms be established for the mix of faculty teaching, service, and research hours per professional student essential for producing an acceptable educational product at a given cost.
2. States and boards of trustees should be prepared to cut back programs and limit enrollments.

3. States should review tuition policies from a strategic and equitable viewpoint. For example, the public medical school tuition averaged $2,000 a year in 1979 while starting physicians were averaging over $50,000 a year (Craig, 10,11,12).

In devising approaches to deal with escalating costs and tightening financial resources, caution should be exercised in adopting short-term solutions which could create long-term problems. Merely employing traditional budget practices such as an across-the-board percentage reduction or impoundment may solve occasional revenue shortages but repeated actions of this sort can affect the ability of institutions to manage their operation and to attract students. A coordinated, planned approach to address areas identified for reduction including reallocation policies is advisable for positive long-term results. "To undertake such reduction institutions should be supported by incentives from legislatures and state planning agencies. Public institutions should be able to see a direct relationship between retrenchment in some programs and enhancement of others; master plans for the 1980s should be plans for reallocation" (SREB, 1982, 11).

Enrollment

The student enrollment information at the selected public professional schools was furnished by the staff of the Tennessee Higher Education Commission. The following table lists student enrollments from 1970 to the present and displays enrollment projections from 1982 to 1991.

STUDENT ENROLLMENT, SELECTED PROFESSIONAL SCHOOLS

FALL TERMS 1970-81

School	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
E.T.S.U. Medicine									24	57	104	146
U.T. Medicine	570	575	478	600	606	609	611	715	723	718	759	769
U.T. Dentistry	411	417	430	446	450	467	469	545	540	533	570	555
U.T. Veterinary							40	99	179	213	212	199
M.S.U. Law	330	568	591	645	564	547	523	545	542	563	571	560
U.T. Law	588	717	681	659	666	634	607	630	609	616	552	577

PROJECTED STUDENT ENROLLMENT, SELECTED PROFESSIONAL SCHOOLS

1982-91*

School	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
T.S.U. Medicine	204	244	268	288	288	288	288	288	288	288
U.T. Medicine	780	760	740	720	720	720	720	720	720	720
U.T. Dentistry	512	512	512	512	512	512	512	512	512	512
U.T. Veterinary	200	220	240	240	240	240	240	240	240	240
M.S.U. Law	575	575	575	575	575	575	575	575	575	575
U.T. Law	575	575	575	575	575	575	575	575	575	575

*Projected enrollments based upon the following assumptions:

1. E.T.S.U. College of Medicine will continue its development to enroll 72 students per class in the fall 1985.
2. U.T. College of Medicine will continue reducing medical students at the rate of 20 per year until fall 1985.
3. U.T. College of Dentistry will continue its reduction in enrollment through fall 1983.
4. U.T. College of Veterinary Medicine will meet its planned class size of 80 in the fall 1984.
5. The U.T. and the M.S.U. law schools will remain stable at 1981 levels.

Revenue

The compilation of revenues realized and the computation of revenues projected for the selected professional programs were furnished by Memphis State University. The enrollment figures listed in the previous section of this study were utilized in computing the revenue projections. The revenues studied in this section were the unrestricted funds used for operating purposes; the categories included in the total unrestricted funds were state appropriations, tuition and fees, federal funds, and "other sources."

In the professional school area, state appropriations have been the largest dollar revenue source, tuition and fees are usually second. In fiscal year 1980-81, the University of Tennessee College of Medicine received 83.3 percent of its total unrestricted funds from state appropriations; the University of Tennessee College of Dentistry received 73.92 percent; University of Tennessee College of Law received 69.23 percent; and the Memphis State University Law School received 59.65 percent (Memphis State University, 1982, 141). Due to different accounting practices, the researchers were unable to secure enough specific information on federal revenues to include them or upon which to base projections. However, with the termination of the federal capitation programs, professional schools are faced with a considerable reduction of federal support. In 1981, federal dollars only represented 3.32 percent of the total higher education unrestricted funds; funds from "other sources" accounted for 11.7 percent of the total.

In reviewing the unrestricted revenues of the selected public professional schools, the categories of total revenues, per student revenues, state appropriations, and student tuition and fees were closely examined. Medical education was the first professional area to be reviewed concerning unrestricted revenues. The state appropriations to the University of Tennessee College of Medicine from 1961 to 1981 increased at an average rate of 14.7 percent compounded annually. For the first ten-year period, the compounded annual rate of growth was 11.9 percent, followed by 17.5 percent compounded annual growth over the second ten-year period. The East Tennessee State University College of Medicine received its first state appropriation of unrestricted revenues totaling $721,000 in 1974-75. By the 1980-81 scholastic year, the appropriation was $4,439,000 reflecting the growth of students and staff.

The University of Tennessee Medical College's tuition and fees increased at an average of 5.6 percent compounded annually from 1961 to 1971, yet increased at an average of only 2.3 percent from 1971 to 1981. Since East Tennessee State University had collected only three years of tuition and fees at the time these data were gathered (1979-81), it was difficult to identify a trend. Without its full projected enrollment in 1981, East Tennessee State Medical College received $241,000 from tuition and fees compared to $4,439,000 from state appropriations.

The following table depicts the 1981 total unrestricted revenues, a breakdown of per student revenues, and the portions of the unrestricted funds from state appropriations and from tuition and fees. Ten-year projections (1981-91) were computed on a yearly basis, but for concentrated illustration, the projections are displayed in five-year intervals. The projected ten-year increase in state appropriations is noteworthy with East Tennessee State University College of Medicine's appropriations increasing approximately 117.99 percent and the University of Tennessee College of Medicine's appropriations increasing 56.18 percent.

A. Medical Education Unrestricted Revenues*

	Total Revenues		Per Student	
Year	E.T.S.U.	U.T.	E.T.S.U.	U.T.
1981	8,596,000	20,715,300	82,653.90	27,292.90
Projected				
1986	14,159,600	24,253,700	49,165.30	33,685.70
1991	19,888,600	34,058,800	69,057.60	47,303.90

	State Appropriations		Tuition And Fees	
Year	E.T.S.U.	U.T.	E.T.S.U.	U.T.
1981	4,439,000	17,256,400	241,000	1,744,200
Projected				
1986	6,882,500	19,214,000	1,213,900	2,492,000
1991	9,676,700	26,951,400	1,717,300	3,525,600

*Source: Memphis State University, 1982

The University of Tennessee College of Dentistry received a greater portion of its unrestricted revenues from tuition and student fees from 1961 to 1964. However, following that brief period, state appropriations became the dominant source of unrestricted revenues. Between 1961 and 1971, the state appropriations increased 342.1 percent or 16 percent when compounded annually over the ten-year period. From 1971 to 1981, the state appropriations increased by 531.6 percent or 20.2 percent as a compounded annual average. The current dollar amount of the increase during the last ten-year period (1971-81) totaled $7,343,100 in state appropriations.

In the area of tuition and fees, a 112.6 percent increase was recorded in the 1971 level over 1961, which represents a 7.8 percent increase when compounded annually over the ten year period. During the next ten-year period (1971-81), a 5.5 percent increase occurred when compounded annually.

The following table displays the 1981 total unrestricted revenues, a listing of per student revenues, and the portions of the unrestricted revenues from state appropriations and from tuition and fees. The projected increase in the state appropriation portion of unrestricted revenues was from $7,343,100 in 1981 to approximately $11,610,900 in 1991 or a 58.12 percent increase.

B. Dental Education Unrestricted Revenues*

U.T. College of Dentistry

Year	Total Revenues	Per Student	State Appropriations	Tuition and Fees
1981	9,934,500	17,429.00	7,343,100	1,722,100
Projected				
1986	11,832,900	23,111.10	8,292,000	2,163,000
1991	16,616,300	32,453.70	11,610,900	3,058,900

*Source: Memphis State University, 1982

During its brief history, the University of Tennessee College of Veterinary Medicine has depended largely upon state appropriations to comprise the majority of its unrestricted funds. In 1981, the unrestricted funds totaled $5,497,000 of which $4,489,000 or 81.66 percent was state appropriations and $250,000 or 4.55 percent was realized from tuition and fees. The following table displays the 1981 total unrestricted revenues, a per student revenue breakdown, and the portions of the unrestricted revenues represented by state appropriations and by tuition and fees. The projected increase in state appropriations from $4,489,000 to $10,110,900 in 1991 represents approximately $5,621,900 or a 125.24 percent increase.

C. Veterinary Medicine Education Unrestricted Revenues*

University of Tennessee College of Veterinary Medicine

Year	Total Revenues	Per Student	State Appropriations	Tuition and Fees
1981	5,497,000	25,929.30	4,489,000	250,000
Projected				
1986	8,625,100	35,937.90	7,201,000	494,800
1991	12,105,100	50,437.90	10,110,900	693,300

*Source: Memphis State University, 1982

In the area of legal education, as in the other professional schools reviewed, state appropriations comprise the largest portion of unrestricted revenues. The University of Tennessee College of Law received $66,200 in state appropriations in 1961, $196,500 in 1971, and $1,082,500 in 1981. The average annual compounded change during the first ten-year period (1961-71) was 11.5 percent and 18.6 percent during 1971-81. The first year of state appropriations to the Memphis State University School of Law was in 1963; it totaled $10,500. The state appropriations increased to $130,100 in 1971, and to $667,800 in 1981. During the first eight-year period (1963-71), the average percentage increase compounded annually was 37 percent; during the next ten years (1971-81), the average annual percentage increase was 17.8 percent.

The University of Tennessee College of Law received $39,800 from tuition and student fees in 1961. This figure increased to $205,800 in 1971 and to $473,500 in 1981. The average annual percentage increase for 1961-71 was 17.9 percent with a 8.7 percentage increase for the 1971-81 period. The Memphis State University School of Law could not report the out-of-state tuition realized because of accounting limitations, but total tuition reported had increased from $22,500 in 1963, to $84,200 in 1971, and to $363,500 in 1981. The average annual percentage increase from 1963 to 1971 was 17.9 percent; from 1971 to 1981 tuition and fees averaged a 15.7 percent annual increase.

The following table graphically displays 1981 levels of unrestricted revenues and makes projections for each category at five-year intervals. The ten-year projection for each institution would require a $1,078,600 or a 99.64 percent increase for University of Tennessee College of Law and $520,400 or a 77.93 percent increase for Memphis State University School of Law.

D. Legal Education Unrestricted Revenues*

	Total Revenues		Per Student	
Year	M.S.U.	U.T.	M.S.U.	U.T.
1981	1,119,500	1,563,700	1,960.60	2,832.80
Projected				
1986	1,352,400	2,373,500	2,352.00	4,127.80
1991	1,893,100	3,328,100	3,292.40	5,788.00

	State Appropriations		Tuition and Fees	
Year	M.S.U.	U.T.	M.S.U.	U.T.
1981	667,800	1,082,500	363,500	473,500
Projected				
1986	849,600	1,543,100	480,100	815,100
1991	1,188,200	2,161,100	673,100	1,145,600

*Source: Memphis State University, 1982

Distribution

The medical education programs at the University of Tennessee College of Medicine and the East Tennessee State University College of Medicine receive their state appropriations by a formula adopted by the Tennessee Higher Education Commission in 1979 following an outside consultant study. In testimony before the Professional Schools Subcommittee, the Chancellor of the University of Tennessee Center for the Health Sciences indicated that the formula was adequate if it were fully funded (Hunt, 1982). The University of

Tennessee College of Dentistry receives its state appropriations as a part of the state appropriations designated by formula to the University of Tennessee Center for the Health Sciences.

The University of Tennessee College of Veterinary Medicine receives its state appropriations directly from the General Assembly without a formula process. The College must meet all expenses from all revenues generated including the escalating costs in such areas as utilities and maintenance; thus, the demand for more revenue has intensified. The law schools at Memphis State University and the University of Tennessee receive their state appropriations as part of the formula allocations to their respective universities. If law school tuition increases were considered, advance planning and procedural change would need to occur for the law schools to receive the added revenue.

IV. PROFESSIONAL MANPOWER

Professional manpower in Tennessee is examined in relation to supply and demand. The determination of supply is based upon the number of professionals per capita rather than the morbidity of the population (Reinhardt, 1981, 1150). A statewide analysis of projected treatment or professional productivity is beyond the purview of this study but represents other contributing factors for the identification of future professional needs. For example, a recent study of dental manpower in North Carolina reviewed the dental health of its population, with special attention to the pediatric segment, and considered the effect of a comprehensive dental insurance plan in the state (Bawden and Defriese, 1981, xv). The national and regional professional manpower supply impinges upon the manpower status of individual states and comparisons of state supply statistics with regional and national statistics were examined.

Selected Professional Manpower Studies

In 1970, the Carnegie Commission found that based upon the uneven geographic distribution of physicians, the waiting lines for emergency services in hospital outpatient clinics, and the long work week of the typical physician, that a shortage of physicians still exists. However, the report indicated there was less evidence of a shortage of dentists (Carnegie Commission, 1970, 36, 37). In another study, Blumberg did document a growth of active physicians from 136 per 100,000 population in 1963 to 157 in 1970 (Blumberg, 1971, 4). In 1970, the shortage of physicians was estimated to be 50,000. Consequently, the Comprehensive Health Manpower Act of 1971 provided the stimulus for expanding medical and dental schools which increased the number of physicians by 55,000 between 1970 and 1975. The Carnegie Council in its 1976 study warned of the serious danger of developing too many medical schools, of the maldistribution and overspecialization in medicine, and of the ample increases in future supply (Carnegie Council, 1976, 3, 6, 8, 45).

In 1978, Arthur D. Little studied the national supply of and demand for veterinarians. At that time, he found that the supply and demand were fairly balanced and projected an oversupply of 3,900 veterinarians by 1985. The report indicated that a demand for economic or food animal veterinarians in certain spot areas does exist (Little, 1978 1-2, 7-1). A recent report on "Legal Education in the Southern Region" indicates a reduction in first year law school enrollments and in the number of people taking the Law School Admissions Test. These declines are interpreted as a reaction to the declining job market for lawyers. The report maintains that when annual bar admissions are compared with demand, a continuing oversupply of lawyers results (Galambos, 1981, 1, 2).

Tennessee Professional Manpower Studies

In 1971, a study on "Medical Education for Tennessee" concluded that the state should adopt as a goal for 1980 to meet the 1967 national average of 145 physicians per 100,000 population. The findings indicated that physician distribution was a problem with the ratio of physicians to population being three times better in the metropolitan areas than in the nonmetropolitan (THEC, 1971, 34-35). "The Tennessee Medical Education Study" accomplished by a committee of medical consultants from outside the state recommended that adequate funds be obtained to upgrade and expand the University of Tennessee Medical School at Memphis, a regional health education center in Knoxville, clinical training and primary centers (giving Upper East Tennessee priority), and a new medical school at Knoxville when adequate funding could be assured (Ives, Dennis, and Willard, 1972, 98, 99).

In 1973 the "Allied Health Education Study" found that Tennessee's supply of dentists was 286 short of the national average in 1970 and projected a greater difference in 1975. The study found that the four metropolitan counties had 59 percent of the dentists to serve 43 percent of the state's population. The study concluded that "the production of more dentists is not the full solution to Tennessee's problems. A better distribution toward rural areas is essential . . ." (THEC, 1973, 14). The report "Perspectives on Medical Education and Health Care in Tennessee" broadened the scope of medical investigation in the state by adding the dimension of health care. The study indicated that the size and complexion of an educational program should be related to the need for physicians, but indicated that this is a speculative endeavor. How much professional education a state can afford should be faced before agreement is reached upon the extent of program offerings. Also, the study's findings indicated that before the second public medical school accepted its first class, the physician per 100,000 ratio in the state compared favorably with other southeastern states. In the conclusion, the point was made that the state has enough medical education to ensure a good future supply of physicians (THEC, 1978, 88, 89).

In 1979 "A Study of Veterinary Supply and Need in Tennessee" examined the supply status and the Southern Regional Education Board (SREB) contract. The findings indicated a shortage of food animal care veterinarians in rural areas. The number of licensed veterinarians had increased from 330 in 1973 to 535 in 1979, thus, "Tennessee will have more than an adequate supply of veterinarians by 1990" (THEC, 1979, 1). The study recommended that the University of Tennessee College of Veterinary Medicine continue to participate in the SREB contract program for not more than ten contract spaces in a class size of eighty (THEC, 1).

The "Status of State Supported Colleges of Law" study was authorized by Senate Joint Resolution No. 297 to compare the financial support of the two law schools with other law schools in the Southeast, to examine accreditation status, and to investigate the budgetary implications of proposed requirements of lawyer skills training by the ABA. The study concluded that the University of Tennessee ranked higher in financial support than Memphis State University in comparison with other southeastern law schools (salaries and library holdings for both schools were low in comparison), that the University of Tennessee was accredited by both the ABA and AALS while Memphis State

University was accredited by the ABA, and that no amendment increasing lawyer skills training requirements had been adopted by the ABA (THEC, 1980, 30, 1).

Professional School Statistics

Since 1970, the Southern Region has added three new public dental schools and ten new medical schools which account for half of all the new medical schools established in the nation. Four new schools of veterinary medicine were added which made a total of eight schools in the South compared with a national total of twenty-two, and eight of the eighteen newly accredited law schools were in the South, bringing the region's total to forty-four compared to 164 accredited law schools nationally (Galambos, 1978, 3, 25, 37). Lewis Mayhew studied the plans and expectations for graduate and professional education in several hundred institutions across the nation and predicted a surplus of advanced degree holders in the 1980s. Some of the most frequently cited pressures forcing institutions to respond to demands for expansion included: the need for highly trained manpower, expansion of scholarly disciplines, role and scope of their master plans, availability of support, and political considerations. Regarding political considerations, Mayhew indicated a law school is important because of presumed relevance of legal training to political careers, while schools of medicine and veterinary medicine have political value (Mayhew, 1970, 6, 7, 8, 9).

During this expansion period, the Tennessee General Assembly authorized two new public professional schools. The East Tennessee State University College of Medicine, and the University of Tennessee, Knoxville, College of Veterinary Medicine were created in 1974. Due to the additional professional schools and increased enrollments in existing schools, the number of graduates in the South and in Tennessee grew rapidly. The following two tables graphically illustrate the growth of regional and state graduates from selected professional schools by decades from 1960 to 1980.

GRADUATES OF SELECTED PROFESSIONAL SCHOOLS IN THE SOUTH

1960, 1970, AND 1980

MEDICAL SCHOOL GRADUATES

YEAR	TOTAL
1960	2,009
1970	2,334
1980	4,301

DENTAL SCHOOL GRADUATES

YEAR	TOTAL
1960	814
1970	829
1980	1,534

VETERINARY MEDICINE GRADUATES

YEAR	TOTAL
1960	117
1970	166
1980	360

LAW SCHOOL GRADUATES

YEAR	TOTAL
1960	1,943
1970	3,566
1980	8,323

Source: Compiled by the Southern Regional Education Board (SREB States)

GRADUATES OF SELECTED PROFESSIONAL SCHOOLS IN TENNESSEE

MEDICAL SCHOOL GRADUATES

	Meharry	Vanderbilt	Tennessee	Total
1960	64	48	172	284
1970	59	55	173	287
1980	114	85	181*	380

*Due to change in graduation schedule, 1981 totals are used.

DENTAL SCHOOL GRADUATES

	Meharry	Tennessee	Total
1960	28	126	154
1970	29	129	157
1980	39	133*	172

*Due to change in graduation schedule, 1981 totals are used.

VETERINARY MEDICINE SCHOOL GRADUATES

	Tennessee
1960	0*
1970	0*
1980	57

*10 contract spaces through SREB in 1960 and 15 in 1970.

LAW SCHOOL GRADUATES

	Memphis State	Tennessee	Vanderbilt	Total
1960	0	45	57	102
1970	53	123	90	266
1980	155	169	179	503

Manpower Supply and Demand

During the past decade, the supply of professional manpower has grown rapidly in the South and in Tennessee. "Between 1970 and 1978, the supply of physicians increased 54 percent in the South, compared to 30 percent in the rest of the nation. While the general population of the South also increased during this time, the rate of increase of physicians outstripped the 17 percent growth in the population" (McPheeters, 1981, 7).

In Tennessee, the number of physicians per 100,000 population increased from 112.7 in 1970 to 160.4 in 1980 or 42.3 percent (Public Health Service, 1981, 23). During this same ten-year period the population increased 16.9 percent (1980 Census). Whether the future demand for physicians will be exceeded depends upon the assumptions for the projections, but the South's physician supply should grow at an average annual rate of 4.4 percent through the year 2000 compared to the average annual population growth of 1.4 percent. The predicted growth of physicians in Tennessee per 100,000 population based upon updated 1965-69 graduate distribution pattern projections will be from 139 in 1978 to 193 in 1990 (Begun and Broom, 1980, Table 4). In the 1971 study of medical education, one recommendation stated that Tennessee should work toward the present national average of physicians by 1980 (THEC, 1971, 44). The 1970 number of physicians per 100,000 population in the United States was 145 compared to 160.4 physicians per 100,000 in 1980 in Tennessee.

The number of dentists per 100,000 population in Tennessee increased from 36.0 in 1970 to 49.7 in 1980 or a 38.1 percent increase compared to a 16.9 percent population growth (Public Health Service, 1981, 40). A recent study by David Engler concluded that the supply of dental services presently exceeds the demand for care by 24.6 percent to 38.4 percent. "The data indicate that the current supplies of dental manpower in Tennessee are more than adequate to meet the demand for dental care in this state" (Engler, 1979, 49).

The veterinarian per population ratios are commonly used as a standard for measuring the adequacy of veterinary manpower. The Senate Committee on Government Operations suggested a goal of 17.5 veterinarians per 100,000 population in 1961 and in 1972 the National Academy of Sciences projected a demand for 18.9 veterinarians per 100,000 population by 1980 (Galambos, 1978, 18, 29). In Tennessee, the number increased from 8.7 per 100,000 in 1970 to 13.9 in 1980 which represents an increase of 59.8 percent. Although the region is slightly below the projected goals of these national studies, "indications are that the gap will be closed by 1985" (Galambos, 29).

The difficulty in projecting the demand for lawyers is created by changing consumption patterns and fluctuation in litigation. When current annual admissions to the bar are compared with various projections of demand, a continuing oversupply of lawyers results. In response to the supposition that lawyers could be absorbed into nonlegal occupations, it is questionable from a public policy vantage point whether this practice is a cost efficient investment (Galambos, 1981, 1, 2). In the Southern Region, law school enrollments seemed to crest in 1975-76 with a total enrollment of 10,006, then began a slight decline with a total enrollment of 9,979 students in 1979-80. Tennessee, however, went from 613 students enrolled in 1975-76 to 618 in 1979-80. "Recently the regional growth in the legal supply exceeded the national rate--a 37 percent increase for the South during the last four years, as compared to 33 percent nationally" (Galambos, 4, 6).

Ratios of supply in the legal profession are calculated by the number of persons per lawyer, so a decrease in the number of persons per lawyer depicts an increase in lawyers as compared to the potential number of persons to be served. In Tennessee, the persons per lawyer ratio in 1970 was 757:1; in 1977 it was 640:1 and in 1980 it was 575:1. The ten-year reduction of 182 (757-575) represents a decrease of 24 percent. Based upon two ratio methods, the annual demand for lawyers in Tennessee went from 431 to 518 compared to the average annual admission to the bar of 505 during 1976-79 (Galambos, 13).

The following tables graphically illustrate Tennessee's improving position in providing professional manpower in the areas of medicine, dentistry, veterinary medicine, and law.

NUMBER OF PHYSICIANS PER 100,000 POPULATION, BY STATE AND BY THE REGION 1970, 1975, AND 1980

State	1970	1975	1980
Alabama	83.6	100.1	126.8
Arkansas	84.6	95.2	119.1
Florida	123.9	155.2	175.2
Georgia	100.3	118.5	142.7
Kentucky	96.4	116.5	135.4
Louisiana	113.6	127.0	153.4
Maryland	170.5	206.2	238.3
Mississippi	78.4	87.4	109.0
North Carolina	102.5	123.5	151.2
South Carolina	84.5	106.0	131.8
Tennessee	112.7	134.1	160.4
Texas	109.1	128.6	157.8
Virginia	112.5	136.4	167.3
West Virginia	97.7	120.3	141.3
South	111.5	133.0	159.4
United States	137.0	155.9	183.9

Source: Public Health Service. Supply and Characteristics of Selected Health Personnel. DHHS Publication No. (HRA-20), June, 1981.

NUMBER OF DENTISTS PER 100,000 POPULATION, BY STATE AND BY THE REGION 1970, 1975, AND 1980

State	1970	1975	1980
Alabama	29.4	30.6	36.7
Arkansas	31.4	31.5	35.7
Florida	38.2	38.8	48.0
Georgia	29.4	34.1	40.7
Kentucky	35.2	37.7	44.9
Louisiana	34.8	39.1	42.7
Maryland	40.3	47.9	57.8
Mississippi	27.9	26.4	32.6
North Carolina	29.8	31.4	38.6
South Carolina	25.4	29.3	36.6
Tennessee	36.0	40.5	49.7
Texas	37.4	38.1	44.7
Virginia	39.4	42.1	49.0
West Virginia	34.0	35.1	40.7
South	35.3	37.5	44.4
United States	47.4	50.5	54.9

Source: Public Health Service. Supply and Characteristics of Selected Health Personnel. DHHS Publication No. (HRA-20), June, 1981.

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NUMBER OF VETERINARIANS PER 100,000 POPULATION, BY STATE AND BY THE REGION 1970, 1975, AND 1980

State	1970	1975	1980
Alabama	12.8	14.5	16.6
Arkansas	11.0	13.2	15.4
Florida	12.4	14.4	15.1
Georgia	13.4	14.7	16.7
Kentucky	10.9	13.0	15.1
Louisiana	8.4	11.0	14.5
Maryland	16.3	19.3	19.3
Mississippi	9.7	11.1	14.5
North Carolina	8.0	9.7	12.1
South Carolina	7.8	8.8	9.7
Tennessee	8.7	10.6	13.9
Texas	14.6	17.2	19.9
Virginia	12.2	13.5	15.3
West Virginia	5.1	6.5	7.7
South	10.8	12.7	14.7
United States	12.7	14.6	16.3

Source: Public Health Service. Supply and Characteristics of Selected Health Personnel. DHHS Publication No. (HRA-20), June, 1981.

POPULATION TO LAWYER RATIOS*

1970-80

State	1970	1977	1980
Alabama	974	780	687
Arkansas	913	774	675
Florida	590	541	392
Georgia	748	661	457
Kentucky	831	713	553
Louisiana	662	537	454
Maryland	527	450	407
Mississippi	802	753	623
North Carolina	1,095	909	735
South Carolina	1,089	884	731
Tennessee	757	640	575
Texas	587	501	452
Virginia	674	639	380
West Virginia	958	804	741
SREB States	711	614	492
United States	572	497	394

*Contrary to the practice in medicine and veterinary medicine, ratios in the legal profession are calculated by population per lawyer, rather than lawyers per 100,000 population. Therefore a decrease in the ratio is an increase in the availability of professional manpower in the legal profession.

Source: Galambos, Eva C. Legal Education in the Southern Region. Atlanta: SREB, 1982.

Distribution of Professional Manpower

Even though this study focuses on the supply and demand status of professional manpower in Tennessee, the important issue of distribution must be mentioned. The distribution of professional practitioners both in terms of geographic location and the availability of specialties, when applicable, are important considerations. The following statements from a 1978 SREB report underscore the concern in this area:

> In recent years, national health policy has been concerned with both the supply and distribution of health manpower. But as the decade ends, there is increasing agreement that most health manpower shortages have been corrected in large part--either in terms of the number of individuals in the work force or those who will soon be graduating and taking their place in the work force. What does remain, however, is a great disparity in the geographic and specialty distribution of health manpower, particularly physicians.
>
> As a result, national policy has shifted from increasing the total supply of manpower to improving the distribution of health professionals for the purpose of bringing about a better distribution of all health services (SREB #13, 1978, 1).

Eva Galambos summarizes the problem and gives some direction for the future:

> Yet gaps persist both on statewide and specific area bases, even after adjustments are made for compensating factors such as lower urbanization in the case of legal services, or fewer animal concentrations in the case of veterinary medicine. In medicine, despite statewide improvement in physician/population ratios, there is no denying that the South continues to lead the nation in terms of critical shortage areas scattered through rural counties in most states . . .
>
> Mechanisms that tie educational institutions to practitioners for the purpose of overcoming professional isolation (such as Area Health Education Centers in medicine) will play a role in determining which of the smaller cities will be successful in attracting and holding professional manpower. Such mechanisms, however, will not insure each remote area with professional services. Instead, present trends of improving access for dispersed populations in rural areas to professional

> services in nearby towns via transportation and other communication modes will continue as the effective economic response for providing services. In the final analysis, professional services are highly specialized human activities that depend upon a concentration of population that is either resident in the area or has access to that location. It will never be economical to scatter professional services into every nook and corner (Galambos, 1978, 48, 49).

A new body of data investigating how the location patterns of physicians have affected the availability of medical services indicates that the situation is much improved. The study analyzed the location of seventeen categories of physicians from 1970 to 1979. The findings do indicate as the supply of physicians increased, smaller communities also increased the various types of medical and surgical services. This trend held true in four different regions, and by 1979 nearby every town of 2,500 or above had a physician or ready access to one. In a twenty-three state sample only fifty-seven towns out of a total of 1,426 were without the services of a nonfederal physician and sixteen of those were classified as part of urbanized areas. Very few of the towns with a population of over 20,000 are without the services of an obstetrician/gynecologist, pediatrician, or radiologist. "Statistical analysis indicates that the specialties increase at a higher percentage rate in smaller communities than in large ones" (Newhouse and others, 1982, 27).

In Tennessee, the 1973 "Allied Health Education Study" found that 59 percent of the dentists were in four metropolitan counties serving 43 percent of the state's population (THEC, 1973, 13). In regard to physicians, the number increased 27.5 percent between 1970 and 1976, but the physician growth rate was greater in urban areas even though the population growth rate was greatest in rural areas (THEC, 1978, 54). The 1979 study of veterinary supply and need found a shortage of food animal care veterinarians in rural areas (THEC, 1979, 1). Distribution of lawyers does not appear to be the same kind of problem as distribution of health professionals. The National Association for Law Placement reported that from the class of 1980, covering 145 out of 169 AVA approved schools, 94.4 percent of the graduates found jobs. However only 54 percent entered the practice of law with various employment categories such as government, business, and clerkships representing the balance (Galambos, 1981, 11).

The following table gives a breakdown by county of the number of active practitioners in Tennessee.

DISTRIBUTION OF TENNESSEE PROFESSIONAL PRACTITIONERS BY COUNTY

County	Population*	Physicians**		Dentists**	Veterinarians**	Lawyers***
		MD	DO			
Anderson	67,346	87	1	40	8	94
Bedford	27,916	16	0	9	5	36
Benton	14,901	7	0	4	0	10
Bledsoe	9,478	2	1	2	1	3
Blount	77,770	82	1	37	8	81
Bradley	67,547	64	3	28	8	70
Campbell	34,923	20	0	8	1	21
Cannon	10,234	6	0	3	2	10
Carroll	28,285	15	1	8	2	21
Carter	50,205	28	0	12	4	33
Cheatham	21,616	3	0	1	0	20
Chester	12,727	3	0	3	2	7
Claiborne	24,595	13	0	2	7	11
Clay	7,676	4	0	1	1	3
Cocke	28,792	7	0	6	1	21
Coffee	38,311	31	3	19	9	53
Crockett	14,941	4	0	3	1	6
Cumberland	28,676	32	0	10	4	24
Davidson	477,811	1,485	2	335	61	1,923

County	Population*	Physicians**		Dentists**	Veterinarians**	Lawyers***
		MD	DO			
Decatur	10,857	5	0	1	1	7
DeKalb	13,589	8	0	4	0	15
Dickson	30,037	19	0	10	1	28
Dyer	34,663	38	0	12	4	48
Fayette	25,305	8	0	3	2	18
Fentress	14,826	6	0	3	0	10
Franklin	31,983	24	0	10	4	22
Gibson	49,467	23	7	19	7	42
Giles	24,625	15	0	9	4	20
Grainger	16,751	2	0	2	0	2
Greene	54,422	53	0	22	7	48
Grundy	13,787	2	3	3	0	3
Hamblen	49,300	48	2	24	5	43
Hamilton	287,740	576	11	180	26	696
Hancock	6,887	2	0	1	0	2
Hardeman	23,873	18	2	6	2	11
Hardin	22,280	14	0	7	2	11
Hawkins	43,751	15	0	10	4	15
Haywood	20,318	9	0	6	2	12
Henderson	21,390	7	1	6	2	15
Henry	28,656	23	2	11	2	17
Hickman	15,151	5	0	4	1	7
Houston	6,871	5	0	2	0	4
Humphreys	15,957	9	0	5	2	10

County	Population*	Physicians**		Dentists**	Veterinarians**	Lawyers***
		MD	DO			
Jackson	9,398	3	0	2	0	6
Jefferson	31,284	14	0	9	4	26
Johnson	13,745	8	0	3	1	11
Knox	319,694	655	4	222	78	894
Lake	7,455	1	0	1	0	8
Lauderdale	24,555	7	0	6	2	13
Lawrence	34,110	16	0	8	5	22
Lewis	9.700	8	0	1	1	7
Lincoln	26,483	15	0	11	8	25
Loudon	28,553	13	0	11	4	20
McMinn	41,878	29	1	18	6	33
McNairy	22,525	9	1	6	1	16
Macon	15,700	5	0	4	3	6
Madison	74,546	139	1	45	7	130
Marion	24,416	13	0	8	1	22
Marshall	19,698	16	1	6	5	18
Maury	51,095	37	0	23	9	59
Meigs	7,431	2	0	1	0	2
Monroe	28,700	15	0	7	6	20
Montgomery	83,342	67	0	32	10	76
Moore	4,510	0	0	1	1	0
Morgan	16,604	4	0	3	0	10
Obion	32,781	32	0	16	3	25
Overton	17,575	7	0	4	3	13

County	Population*	Physicians**		Dentists**	Veterinarians**	Lawyers***
		MD	DO			
Perry	6,111	2	1	1	0	4
Pickett	4,358	1	0	1	0	2
Polk	13,602	8	0	5	0	2
Putnam	47,690	47	0	19	8	57
Rhea	24,235	9	1	8	2	12
Roane	48,425	32	0	21	4	39
Robertson	37,021	21	1	11	8	25
Rutherford	84,058	77	0	32	12	116
Scott	19,259	6	0	3	0	20
Sequatchie	8,605	4	1	2	0	6
Sevier	41,418	22	0	11	7	38
Shelby	777,113	1,854	12	517	81	1,899
Smith	14,935	6	0	2	2	12
Stewart	8,665	1	0	3	0	5
Sullivan	143,968	274	1	90	14	199
Sumner	85,790	59	1	26	11	78
Tipton	32,930	15	1	9	3	23
Trousdale	6,137	4	0	2	1	6
Unicoi	16,362	10	0	8	1	13
Union	11,707	2	0	1	0	3
Van Buren	4,728	1	0	1	0	1
Warren	32,653	19	0	14	4	27
Washington	88,755	205	2	46	12	117
Wayne	13,946	3	1	2	0	6

County	Population*	Physicians**		Dentists**	Veterinarians**	Lawyers***
		MD	DO			
Weakley	32,896	20	1	11	4	21
White	19,567	10	0	5	3	11
Williamson	58,108	31	0	21	17	92
Wilson	56,064	36	0	14	6	55
Unknown	0	1	0	0	0	578
Total	4,591,120	6,758	70	2,225	561	8,482

*1980 Census

**Tennessee Department of Public Health Center for Health Statistics (1981)

***Supreme Court Active Lawyer listing prepared by Volunteer State (1982)

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V. RECOMMENDATIONS

1. In an effort to upgrade the quality of the professional schools reviewed and to address the supply and demand status of professional practitioners in Tennessee, the Governor and the General Assembly should adopt the strategy of reducing student enrollment. Through funding incentives and by attracting better qualified students, the professional schools involved in the plan would receive a monetary incentive of protected state appropriations rather than suffer a loss of appropriations corresponding to the reduction of student enrollment. The protected funds would be reallocated within the institution to strengthen the quality of areas such as research. Specific student enrollment reductions were considered for each area of professional education.

A. Dental Education

The University of Tennessee College of Dentistry has initiated a well documented request to reduce the entering student class to 90 students and the administration of the College should be commended for this action. Based upon the incentive feature of the student reduction plan, the College of Dentistry would not receive a reduction in state appropriations corresponding to the student reduction. The College could comply with its accreditation report by reallocating the resources to the area of faculty research.

B. Medical Education

The University of Tennessee College of Medicine should reduce its entering class enrollment at the rate of approximately 10 percent per year until the size of the entering class reaches 150. During this two year reduction period, as a funding incentive, the College would not receive a reduction in state appropriations corresponding to the student reduction. These funds realized would be available for reallocation within the College.

The East Tennessee State University College of Medicine admitted an entering class of 54 students for the scholastic 1982-83 year and is projected to admit 72 students per year as soon as its accrediting agency will approve that number. The College was built and staffed to serve 72 students per class and would not be cost effective if less than 60 students per class were admitted based upon the diseconomy of scale. If state appropriations are to ensure a fully accredited, quality medical education program at East Tennessee State University, the size of the entering class should be maintained at 60 (when the Liaison Committee on Medical Education approves the increase from the present entering class of 54).

C. Veterinary Medicine Education

The University of Tennessee College of Veterinary Medicine was projected to admit a class of 80 students per year but presently is admitting 60 students per year. The entering enrollment of the College should be maintained at the present level of 60 and state appropriations should continue on an equitable basis (see Recommendation 7). The funding level should ensure a quality, accredited veterinary medicine program.

D. Legal Education

The Memphis State University School of Law should reduce its entering class enrollments at the rate of 10 percent per year until the entering classes reach 100 full-time students per year and 50 part-time students per year. As a funding incentive to improve quality, state appropriations would be maintained rather than decreased due to the student reductions. The funds realized would be available for reallocation to improve the quality within the School of Law.

The University of Tennessee College of Law should reduce its entering class enrollment at the rate of approximately 10 percent per year until the entering class reaches 140 students per year. As a funding incentive, state appropriations would be maintained rather than decreased due to the student reductions. The funds realized would be available for reallocation to improve quality within the College of Law.

2. The University of Tennessee Board of Trustees and the State Board of Regents will continue to ensure that the professional schools in their systems will maintain the levels of quality required by the appropriate accrediting agencies, and the Governor and the General Assembly should continue to appropriate the funds necessary to ensure this quality standard.

3. Each public professional school should be encouraged by the Governor and the General Assembly to continue high standards of student admission and to maintain high scholastic standards throughout the professional education experience.

4. The feasibility of allocating additional professional school spaces for nonresident students should be seriously considered by the Governor and the General Assembly. After qualified Tennessee students are served, the consideration of highly qualified nonresidents could improve the overall quality of enrollment in the professional schools.

5. In order to keep highly qualified students in Tennessee, additional scholarships, grants, and loan forgiveness programs for particular areas of critical manpower shortages should be initiated by the Tennessee Higher Education Commission and submitted to the General Assembly and the Governor for funding. In the development of the programs, particular attention should be given to the recruitment of minority and low income students. In the area of loans, a collection mechanism should be formulated to help ensure loan retirement through service or repayment.

6. The tuition level of the professional programs will be carefully reviewed, and the Tennessee Higher Education Commission will consider increasing the proportion of tuition as compared to state appropriations. A plan should be developed to ensure that the funds generated by the tuition increase for each professional school will be allocated to the respective professional school without a loss in appropriations.

7. The Tennessee Higher Education Commission will devise an equitable formula by which the University of Tennessee College of Veterinary Medicine will receive state appropriations.

8. The General Assembly will require a uniform accounting system for all higher education boards and institutions. The system should have the capability to provide an accurate, up-to-date record of revenue and expenditure transactions by program.

9. Salaries for professional school instructional personnel will be periodically reviewed by the Tennessee Higher Education Commission to help ensure comparable compensation with similar instructional personnel in the Southern Region.

CHAPTER EIGHT

SUMMARY AND RECOMMENDATIONS

The Tennessee Comprehensive Education Study was designed to be compatible with its enabling legislation. The Task Force appointed to review public education was divided into four subcommittees which represented different educational levels and responsibilities. Each subcommittee focused on similar broad areas of inquiry, and the recommendations formulated by each subcommittee were included as sections of their respective chapters. The four sets of recommendations flowed through the Coordinating Committee before being considered for revision and approval by the entire Task Force. This procedure ensured a coordinated, well-conceived group of recommendations which comprises the action plan for the future of Tennessee public education.

The research outline included several basic questions which served to direct the inquiry within the areas outlined in Senate Joint Resolution No. 56. Chapter Two addresses the question regarding the economic and financial factors affecting public education in Tennessee, and Chapter Three reviews the question pertaining to the states's educational law. The statewide assessment of public education accomplished by each subcommittee identified specific improvements desired in each area. These improvements were written in the form of either immediate or long-term recommendations. The following sections contain the questions considered and the recommendations approved by the entire Task Force. These sections reflect the recommended changes or improvements in the areas of educational goals, governance, quality, and fund distribution.

The opportunity to have a legislatively sponsored Task Force review all levels of public education in Tennessee is a rare occurrence. Therefore, many of the following recommendations will be directed to the coordinating or governing boards, departments, institutions, or local education agencies. The specific recommendations requiring a change in statute will be extracted from the comprehensive list and submitted in summary form to the General Assembly.

I. EDUCATIONAL GOALS

What goals can be identified for each educational component?

A. Goals of Education, Kindergarten through Grade Twelve

1. Academic Goals for Every Student
    - a. Develop skills in reading, writing, speaking, and listening.
    - b. Develop skills and attitudes which facilitate learning.
    - c. Have competence in the fundamentals of mathematical concepts, principles, and skills.
    - d. Gain a general education.
2. Personal Goals for Every Student
    - a. Develop pride in work and a feeling of self-worth.
    - b. Develop good character and self-respect.
    - c. Know the principles, habits, and attitudes conducive to good physical and mental health.
    - d. Have sufficient information to realize his/her life goals.
3. Social and Civic Goals for Every Student
    - a. Know and practice the basic requirements of responsible citizenship.
    - b. Establish and maintain satisfactory relationships with other persons.

c. Understand and practice democratic ideas and ideals.

d. Develop skills to enter the world of work.

4. Local Goal Setting. Each local board of education should set specific educational goals for its school system within the context of the goals established by the State Board of Education.

5. Progress Toward Goals. A system for evaluating each school system's progress toward achieving state and locally established goals should be devised by the State Department of Education and such evaluation should be required periodically by the State Board of Education.

B. Goals of Vocational-Technical Education

1. Develop in students pride in work, a sense of accomplishment, and a feeling of self-worth from a task well done.
2. Promote new industry and business throughout the State of Tennessee by providing skilled labor.
3. Promote trade, technical, or business-related employment for all graduates of vocational-technical programs.
4. Develop the occupational awareness and decision-making skills of students at all levels of vocational-technical instruction.
5. Improve the composition of the labor pool throughout the state by providing training opportunities in specified areas of need.
6. Complement the goals of all education, including meeting needs of the handicapped and economically disadvantaged, in that through employment the quality of life improves.
7. Promote student mastery of basic skill development in the areas of reading, communications, and mathematics.
8. Provide vocational-technical education at whatever life stage the occupational training is needed.

C. Goals of Higher Education

1. Develop and maintain quality programs in instruction, research, and service.
2. Provide educational opportunities for all citizens who have the ability and interest to attend college.
3. Provide training that will aid in suitable employment.
4. Provide instruction and experiences that develop students' awareness of their own physical and intellectual capacities.
5. Encourage the pursuit of lifelong learning.
6. Provide instruction and experiences that develop students' personal value standards and ability to evaluate alternatives.
7. Provide instruction and experiences that develop students' understanding of society and the responsibility of the individual within it.
8. Provide instruction and experiences that develop abilities of judgment and preference.
9. Provide those programs that are responsive to current needs and plan for future program and service needs.

II. GOVERNANCE

How well does the present governance structure serve public education in the state?

A. Grades K-12

1. The Commissioner and the State Board of Education should continue to have the responsibility for the governance and administration of all programs directly or indirectly related to kindergarten through grade 12.

2. The governance of the four State Special Schools (Tennessee Preparatory School, Tennessee School for the Deaf, Tennessee School for the Blind, and Alvin C. York Institute) should remain under the jurisdiction of the State Board of Education at the present. As soon as it is feasible, the State Board of Education, the State Department of Education, and the General Assembly should investigate the various problems at each school and develop recommendations for improving programs and conditions at the Special Schools.
3. Serious consideration should be given to requiring that all elementary and secondary nonpublic schools be approved by the Commissioner and the State Board of Education.
4. The present method of selection for State Board of Education members and the Commissioner of Education shall be continued.
5. The Commissioner should continue to serve as the administrative officer of the Department of Education, and the State Board of Education should continue to function as the policymaking body in regard to rules, regulations, and minimum standards for the Department of Education.
6. The primary functions of the State Department of Education shall include:
    a. advisory capacity to local education agencies
    b. program evaluation and research
    c. leadership for local education agencies
    d. regulatory agent for local education agencies
    e. monitoring agent for local education agencies.

7. In order to advise local systems and to carry out its leadership role, the Department of Education should establish a data bank and clearinghouse for information and all research projects. Such a division should be responsible for the coordination of all data collection and data processing activities in the Department; should serve as a liaison between the Divisions; should disseminate information upon request to the public and the General Assembly; and should work toward improving the public image of education in the state.

8. All Divisions of the Department should work together more closely in coordinating activities and sharing information.

9. Forms required to be completed by LEAs should be reduced where possible, and duplication of information on required forms for LEAs should be eliminated.

10. The General Assembly should review all sections of the Tennessee Code Annotated pertaining to membership on local boards of education in light of enacting a general provision to provide for determining an appropriate number of members for local boards of education within the range of five (5) to twelve (12) members.

11. The General Assembly should investigate the possibility of enacting legislation to provide for uniform lengths of terms not to exceed six (6) years for elected local board members and for staggered terms statewide.

12. The General Assembly should consider amending the Tennessee Code Annotated by changing the office of county superintendent from its present status as a county office and providing for the selection of a county superintendent by three methods: the

county commission, election by the people in the school district, or selection by the local school board.

13. Tennessee Code Annotated, Section 49-222 should be amended to allow the State Board of Education to set standards for the certification requirements for superintendents which exceed the minimum standards established by statute, provided any additional requirements would not apply to superintendents presently certified under T.C.A. 49-222.

14. Small school districts should be reviewed in light of their cost effectiveness with the idea of possibly tightening further the limitations on the creation of new school districts and the number of school districts presently allowed within counties.

15. School districts are urged wherever possible to keep the grade spread of their schools in conformity with the definitions of schools found in the Code.

16. Serious consideration should be given by school districts, wherever possible, to establishing schools with several consecutive grades, i.e., more than one or two grades per school. More parental and community support is found for schools that children can attend for more than one year; also, more continuity is possible in instruction and less adjustment each year is needed for students.

17. Nonpublic schools should be defined in terms of organization (i.e., number of students, number of teachers, etc.) and such a definition should be included in the Code.

18. Tennessee's compulsory attendance age should remain "between the ages of seven (7) and sixteen (16) years, both inclusive" (T.C.A. 49-1708).

19. It is not recommended that a statewide opening date for all schools be mandated, but the administrators of each LEA are strongly urged to consider the wishes of the parents and teachers in their district in establishing opening and closing dates for their schools.

20. School administrators (boards, superintendents, and principals) should investigate all possible scheduling arrangements to provide every teacher at least one period for class preparation within the present school day. If possible, this should be done by hiring where necessary additional appropriately certificated staff for P.E., art, music, etc. Cooperation among teachers in effecting this should be explored and possible usage of qualified community members.

Long-Term

1. As soon as it is possible to provide the additional state and local funding needed, kindergarten attendance should be mandatory.

2. If kindergarten attendance becomes mandatory, the entrance age should be changed from "five (5) years of age on or before October 31 of the current kindergarten term" to "five (5) years of age on or before September 30th of the current kindergarten term" [T.C.A. 49-2305 (c)]. This change would bring the required kindergarten entrance age in line with the required entrance age (six (6) on or before September 30th) for the first grade (T.C.A. 49-1702).

3. It is recommended that the General Assembly examine the length of terms for all state coordinating/governing boards of public education, including the State Board of Education, the State Board of Regents, the University of Tennessee Board of Trustees, and the Tennessee Higher Education Commission, to consider establishing six-year terms on a staggered basis for all such boards.

B. Vocational-Technical Education and Higher Education Governance

1. It is recommended that the governance and administration of all postsecondary programs under the authority of the State Commissioner of Education and the State Board of Education be transferred to the State Board of Regents. This would include all postsecondary vocational-technical programs, including the twenty-seven (27) area vocational schools and the four (4) technical institutes. The integrity of the respective institutions involved should be preserved.

Long-Term

1. Consideration should be given toward creating a separate governing board responsible for all postsecondary non-baccalaureate institutions and creating a separate governing board responsible for all baccalaureate institutions. The integrity of the respective institutions should be preserved.

C. Vocational-Technical Education Governance

1. The State Board for Secondary Vocational Education should remain the sole board responsible for the distribution of federal funds.
2. Because of tightening economic conditions and the need for greater accountability, vocational-technical governing boards should assume more of a role in quality control and evaluation.

3. All educational governing boards or representatives from each state board should meet together to discuss common issues at least twice a year and staff representatives should meet together at least four times a year. Coordination should be on a voluntary basis where possible.

4. Formal articulation agreements should first be developed between governing boards and then between co-located institutions, secondary and postsecondary. These plans should be maintained indefinitely and revised regularly.

5. Students who have dropped out of high school and are age seventeen (17) or older should be allowed to enroll in postsecondary non-baccalaureate institutions if they meet the minimum admission requirements as established by the appropriate governing board.

6. The licensing of all proprietary, non-baccaulaureate institutions should be transferred to the Tennessee Higher Education Commission.

D. Professional Schools Governance

1. It is recommended that a special commission of interested parties be appointed to study the feasibility of joint governance and administration of professional schools. The reason for this effort is to ensure the vitality of medical and legal education within this state by reducing costs and obtaining the maximum benefit from state tax dollars.

III. QUALITY

What indications of instructional quality can be determined in each educational component?

A. Grades K-12 (Regular Instructional Programs)

1. A statewide testing program using norm-referenced national achievement tests should be established for all students in one (1) of the primary grades and in one (1) of the intermediate grades.
2. The State Board of Education should develop within a two-year period a Basic Skills Certificate which students shall attain before entering high school. Such a certificate will be awarded when a student demonstrates an acceptable level of proficiency on a statewide basic skills examination. Such a test should replace the State Minimum Proficiency Test.
3. The State Board of Education should continue to examine curriculum requirements for all grades, including time requirements for Language Arts and Mathematics in Grades 1 through 8.
4. Any curriculum revisions for Grades 1-8 should allow for the following amount of time to be spent on these subjects:

Language Arts	Grades 1-3, 15 hours per week
	Grades 4-8, 10 hours per week
Mathematics	Grades 1-3, at least 5 hours per week
	Grades 4-8, 5 hours per week.

5. Curriculum requirements should include formal reading instruction in Grades 7 and 8.

6. LEAs should arrange student school schedules so that 80-90 percent of the school day is spent on classroom instruction in Grades 1-6, and 85-95 percent of the day is spent on classroom instruction in Grades 7-12.
7. LEAs should place primary emphasis on achieving basic skills in Grades 1-8, by outlining minimum specific objectives and skills to be mastered at each grade level before promotion to the next grade.
8. The State Board of Education should increase the present graduation requirements to include one (1) additional unit in Mathematics, one (1) additional unit in Science, and one-half (½) additional unit in Social Studies.
9. LEAs should be required to review all curriculum offerings in Grades 9 through 12 including vocational courses and eliminate courses that are outdated and not relevant to the future demands of society.
10. The State Department of Education and LEAs through a cooperative effort should establish more flexible guidelines to allow students to take one-hour, two-hour, or three-hour vocational courses with scheduling consideration given to the junior and senior years.
11. All LEAs should place more emphasis on programs for gifted students, and should consider using Chapter II funds where possible for such programs.
12. A program accounting system as recommended in Number 1 under Funding should be established to provide needed data on the expenditure of handicapped funds for identified and served intellectually gifted students.

13. The State Textbook Commission should consider reducing at the state level the number of books for adoption by local systems.
14. The textbook adoption cycle at the state level should begin earlier than July to allow adequate time for review of all books.
15. If the State Textbook List is reduced at the state level, it should include in Grades 1-8 at least two textbooks at grade level for each subject in each grade, at least two textbooks below grade level in each subject, and at least two textbooks above grade level.
16. State and local school officials should let publishers know what kinds of books they want (content, reading level, etc.).
17. An arithmetic textbook should be required for adoption in Grades 1 and 2.
18. LEAs should be encouraged to adopt and use at least one textbook in each subject at grade reading level in all grades.
19. Careful study by the State Department of Education should be given to ensure adequate instructional materials for each classroom.
20. LEAs should be encouraged to retain textbooks if they are usable and appropriate beyond the five-year adoption cycle.
21. A panel of expert teachers in each subject area should be chosen to advise Textbook Commission members on book selections. The teachers selected will receive the same reimbursement as Textbook Commission members, as funds become available.

22. The State Department of Education should assume a leadership role in:

    a. developing lists of available software, computer resource people, and effective computer-utilization locations for LEAs
    b. developing models for inservice training for teachers in computer usage for both computer-assisted and computer-managed instruction
    c. investigating the potential of microcomputers for usage by small school systems for instruction in courses where qualified teachers are not available.

23. LEAs should assure adequate inservice training in computer usage for office staff and for all teaching personnel before computer literacy, computer-assisted, and computer-managed instruction are attempted.

24. LEAs, where possible, should exchange effective software.

25. The use of microcomputers for computer-assisted instruction for remedial purposes and for high achievers should be stressed where facilities are limited.

26. Computer literacy should be included in the high school curriculum as an elective.

27. All teacher preparation institutions in the state and the Division of Certification in the Department of Education should upgrade teacher preparation programs in regard to:

    a. the amount of field experience students receive in college
    b. the amount of subject area content required
    c. the possibility of combining specialty areas in teacher preparation programs with graduates being prepared to teach in more than one area.

28. The State Board of Education should review present certification requirements in regard to the number of credit hours required for certification in specific subject areas (in particular, in reading for elementary teachers, and in all subject areas for secondary teachers), and should increase requirements as needed to bring Tennessee's certification requirements in line with other SREB states.

29. The State Board of Education should consider requiring an apprenticeship program for beginning teachers prior to professional certification. During such a period, the apprentice-teacher would be closely supervised and evaluated by a "master teacher."

30. The State Department of Education should establish inservice training models for LEAs including, but not limited to, the following areas:
    a. effective teaching techniques and methods for different types of students
    b. classroom management techniques
    c. positive attitudes of teachers toward all students' ability to learn
    d. training principals and other staff members to be instructional leaders
    e. emphasis on basic skills
    f. computer usage
    g. evaluative procedures for principals and other administrators
    h. mainstreaming of handicapped students.

31. The State Department of Education should set guidelines for inservice education that:
    a. provide for input from teachers as to needs, goals, and activities
    b. place teachers in an active role
    c. are school-based
    d. provide opportunities for teachers to share and provide assistance to each other
    e. are coordinated with goals set by individual schools and school systems
    f. provide for evaluation of inservice activities in regard to staff development and future planning.
32. The State Department of Education should require that a substantial amount of time in teacher inservice education be devoted to updating expertise in subject matter areas.
33. Uniform evaluation instruments should be developed at the state level for all certificated personnel and required for usage by LEAs.
34. In developing or providing such an instrument, the State Department should utilize current research on evaluative techniques and statewide practices.
35. LEAs should be encouraged to use evaluation procedures for the primary purpose of staff development and improvement.
36. If possible, evaluation of school personnel should be performed at the school building level and not by system-wide personnel.
37. All local education agencies should be encouraged to assume a leadership role in formulating community advisory councils.

38. The State Department of Education should provide increased assistance to LEAs in planning and developing community education programs.

Long-Term

1. Computer literacy should be included in the high school curriculum as a requirement.
2. The state should set as a long-range goal raising the level of the average teacher's salary in Tennessee to the average teacher's salary of the states belonging to the Southern Regional Education Board (SREB).
3. The State Board of Education should consider extending the experience factor in the State Minimum Salary Schedule beyond the present fifteen years for teachers and sixteen years for superintendents to include three longevity increments to be earned after 20, 25, and 30 years service.
4. The State Board of Education should consider increasing the add-on factor for principals' salaries.
5. The State Board of Education and LEAs should investigate ways of rewarding outstanding teachers (as determined by fair and impartial evaluation) over and beyond their set salaries.
6. The State Board of Education should develop a plan for providing salary supplements for mathematics and science teachers.
7. The State Department of Education should continue its reorganization of the school approval process with the elimination of as much paper work as possible.
8. School approval should become more meaningful and a viable means of improving the quality of schools by requiring each LEA to

assess its progress toward established goals. Such progress should be monitored by the state every three years.

9. The procedure of issuing waivers particularly for oversize classes should be reviewed carefully. A redefinition of class size requirements utilizing average size classes within a school setting should be considered. All classes over the state mandated size will be reported as in the past.

B. Special Education Quality

1. Tennessee special education programs should fulfill the following functions in accordance with the quality indicators listed under each function in B. Section IV of Chapter Four:
   a. Should teach students with handicapping conditions the skills necessary to participate more independently and more effectively in family and community life.
   b. Should encourage handicapped students to participate actively in normal school functions and should foster among all students an increased awareness of and appreciation for "differentness" in whatever form.
   c. Should incorporate the family in making decisions about and carrying out educational programs for students with handicapping conditions.
   d. Should encourage the building of an effective cadre of professionals and paraprofessionals who can meet the educational needs of students with special learning problems.
   e. Should work in close conjunction with regular education programs and should include a range of placement options for those students whose needs require more specialized attention than regular teachers can provide in full-time regular classroom.

f. Should encourage the active participation of the community in services for students with handicapping conditions.

Long-Term

1. The Division for Education of the Handicapped and other agencies involved in the administration of special education programs should work toward developing a truly comprehensive and coordinated system of educational services for students with handicapping conditions by investigating the following areas:

   a. Effective coordination of educational programs. The possibility of organizing under the umbrella of the Division for Education of the Handicapped all educational programs for students with handicapping conditions should be investigated.

   b. Effective coordination of educational and noneducational programs. Agencies providing services to handicapped students should find ways of more efficiently coordinating educational and noneducational services to provide maximum benefits for students and the community.

   c. Funding. Particular attention should be paid to how funds appropriated for special education are actually spent. The fact that no funds are appropriated for new buildings and/or renovations should be studied.

   d. Parent and community involvement. Ways need to be found to involve parents and interested members of the community in more policymaking and evaluation activities.

   e. Inservice training models. Development of more effective inservice training models should be carefully considered.

   f. Program evaluation. Much work needs to be done in evaluating the long-range effectiveness of various programs and teaching methods.

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g. Quality concerns. Administrators need to seek ways to move from compliance issues to quality issues. Minimum standards should be developed, and incentives could be offered for quality programs and quality performance by program personnel.

2. The State Board of Education and the State Department of Education should investigate the possibility of establishing a state school for the gifted and talented to encompass all subjects.

C. Vocational-Technical Education Quality

1. Access for vocational-technical education in this state is the right of every citizen. Because of the wide range of abilities of the individual student, the need for developmental studies is critical. Governing boards should require basic skills development in all institutions offering vocational-technical education.

2. In areas of low minority enrollment, efforts should be made to attract minority students.

3. Preservice and inservice for counselors should include instruction in technical curriculum development, career education, employment practices, and experiences in business and industry should be made a part of either preservice or inservice requirements.

4. Evening courses and weekend courses should be increased in order to accommodate more full-time workers.

5. When measuring student attainment for program accountability institutions should consider: reasons for enrolling in the

program, socioeconomic background, attitude toward education and work, self-assessment of ability, and the realities of the labor market.

6. Students enrolling in vocational-technical programs should be given pretests and post tests in order to measure competencies gained. Each student should be made aware of the specific skills and competencies he/she should possess at the end of training.
7. All governing boards should develop an exchange program with business and industry. The purposes of the program would be to improve the quality of vocational-technical instruction and provide business and industry the opportunity to have more input into the educational process.
8. Salaries for "state of the art" technical or business technology instructors need to be increased to at least minimum private industry scale.
9. Where possible, vocational-technical instructors should be given competency based skill testing before employment.
10. Counselors and administrators should pursue training in labor market data collection, analysis, and dissemination.
11. Teacher education institutions should have clearly established goals, objectives, and practices relative to vocational-technical education on the undergraduate and graduate level.
12. Vocational-technical teacher educators should be knowledgeable in the "state of the art" and new and changing technology.
13. Placement personnel in any institution offering vocational-technical instruction should have strong business/industrial experience.

14. A standard affirmative action plan should be developed for all public schools in Tennessee.

15. Industrial leave should be strongly supported by the governing boards and institutional administration.

16. New and part-time instructors should be required to participate in an orientation program before classroom duties are assigned.

17. Instructional planners and administrators need to constantly develop relationships and contact with industry and business to make sure that the sequence of job skills taught in their programs is appropriate.

18. There is a serious lack of technical education instructional personnel. Comprehensive statewide planning for staff development for technical educators and alternative methods for training need to be developed. This training should emphasize teaching skills for new instructors and technological update for current instructors.

19. Based on a set of predetermined standards established by the governing board, nonproductive programs should be terminated and replaced with productive ones. Governing boards should leave the responsibility of program justification to the local institutions. No programs should be automatically continued.

20. The appropriate governing boards should develop a more thorough student follow-up system to improve the data base for quality control and curriculum revision.

21. The appropriate governing boards should give extra consideration for increased funding for those institutions planning high technology programs.

22. The process of new program approval should be altered to reduce the long lead time that impedes the progress of new program implementation.

23. Steps should be taken to improve the validity of employment needs surveys and labor market projections. These data are crucial in forecasting the needs of business and industry.

24. Accreditation is only one indication of quality. It should be viewed as a minimum requirement and institutions should use it as a base upon which to improve.

25. Institutional evaluations should have broad-based involvement. Evaluations should include instructors, advisory committees, administrators, support personnel, students, community organizations, and the private sector.

26. Institutions should include the results of the evaluations in their promotion and publicizing of vocational-technical programs. Business, industry, and the public should know that the state is concerned with providing quality training in the most effective and efficient manner.

27. The appropriate governing board should develop a vocational-technical evaluation system. Emphasis should be placed on helping instructors, curriculum coordinators, and policymakers establish criteria by which to measure program effectiveness.

28. In determining the quality of vocational-technical programs several indicators and measurements should be utilized. Governing boards should approve policies which establish the indicators of quality and serve to monitor the various programs and institutions. In order to guarantee that students receive

the best training available, these indicators should include:

a. carefully coordinated authorization on licensure procedures

b. evaluation based on qualitative and quantitative criteria

c. program planning based on the budget

d. coordination of institutional planning with statewide planning.

29. The evaluation of institutional and instructional quality should at least include instructor qualifications and background, student placement rate, and a review of course content.

30. Each vocational-technical institution should maintain a strong advisory committee to participate in planning, curriculum development, and job placement.

D. Higher Educational Quality

1. Postsecondary institutions should determine their particular programs of excellence and focus on maintaining if not enhancing such excellence.

2. The appropriate governing boards should encourage institutions to fulfill their particular missions by overseeing admission standards and program offerings within the following parameters.

Community Colleges should provide:

a. college transfer programs

b. one and two-year degree programs, primarily in technical fields; no junior or senior level programs are to be offered

c. open admissions for those with a high school diploma or general equivalency degree; particular programs within the college are expected to have admission standards

d. strong remediation programs for the less academically prepared; remediation is to be completed in the student's first year of college work and is not to be taken for college credit

e. non-credit continuing education programs designed to meet the needs of the community and business and industry.

Technical Institutes should provide:

a. open admissions for those with a high school diploma or general equivalency degree; particular programs within the institute are expected to have admission standards

b. only one or two-year degree programs in technical fields; no junior or senior level programs are to be offered

c. technical training programs to meet the needs of business and industry.

Four-year institutions should provide:

a. selective admission standards ensuring educational opportunities for academically well-prepared; remediation will be reduced as a long-range goal

b. four-year degree programs, masters, and doctoral as designated

c. opportunities for research related to designated programs of excellence

d. continuing education programs as related to community needs.

3. Postsecondary institutions should incorporate into their admission criteria the basic academic competencies expected of entering students and articulate these expectations to the secondary schools.

4. Postsecondary institutions should improve their retention strategies.
5. Postsecondary institutions should restrict enrollments once optimum enrollment levels, as approved by the appropriate governing boards, have been reached.
6. The appropriate governing boards should aid institutions in establishing admission standards for technical and professional programs.
7. The appropriate governing boards should aid institutions in developing ways to assess student outcomes, such as, student academic gains, student satisfaction with the educational experience, employer satisfaction with graduates, as applicable to individual programs within institutions.
8. The appropriate governing boards should be responsible for institutional program review on a regular basis.
9. The Tennessee Higher Education Commission should thoroughly investigate the issue of academic tenure as it pertains to quality for the purpose of providing recommendations to the appropriate governing boards.

E. Teacher Preparation

1. Admission requirements to teacher preparation programs are to include requiring a grade point average of 2.5 on a 4.0 scale for the first two years of undergraduate work and the achievement of a passing score on Form 19 of the California Achievement Test, which is to be supplemented by requiring a written composition.
2. The professional core should provide additional exposure to a variety of field-based classroom experiences.

3. The appropriate governing boards should establish ongoing evaluations of teacher education programs.
4. The appropriate governing boards should assess the need for and the quality and productivity of all teacher preparation programs and specialities, eliminating unnecessary duplication.
5. Upon completion of the professional core, students should pass the Specialty Area Exam of the National Teachers' Exam, where available or a state developed test, to demonstrate their command of knowledge essential to teaching in their certification area, as well as passing the Core Battery.
6. Certification requirements should be established to accommodate teachers in related surplus fields by issuing temporary endorsements to teach mathematics and science with the understanding that a specified number of refresher courses would be taken within a year.

Long-Term

1. The appropriate educational boards should encourage local schools to establish the rank of "Lead Teacher" to act as a mentor for new and student teachers.
2. Teacher education personnel should work with local lead teachers to provide inservice programs that enhance current teachers' skills.
3. As the lead teacher concept is implemented, new teachers would be certified only after demonstrating their teaching competence during a year's internship with a lead teacher.

F. Professional Schools Quality

1. In an effort to upgrade the quality of the professional schools reviewed and to address the supply and demand status of professional practitioners in Tennessee, the Governor and the General Assembly should adopt the strategy of reducing student enrollment. Through funding incentives and by attracting better qualified students, the professional schools involved in the plan would receive a monetary incentive of protected state appropriations rather than suffer a loss of appropriations corresponding to the reduction of student enrollment. The protected funds would be reallocated within the institution to strengthen the quality of areas such as research. Specific student enrollment reductions were considered for each area of professional education.

2. The University of Tennessee College of Dentistry has initiated a well documented request to reduce the entering student class to 90 students and the administration of the College should be commended for this action. Based upon the incentive feature of the student reduction plan, the College of Dentistry would not receive a reduction in state appropriations corresponding to the student reduction. The College could comply with its accreditation report by reallocating the resources to the area of faculty research.

3. The University of Tennessee College of Medicine should reduce its entering class enrollment at the rate of approximately 10 percent per year until the size of the entering class reaches 150. During this two-year reduction period, as a funding incentive,

the College would not receive a reduction in state appropriations corresponding to the student reduction. These funds realized would be available for reallocation within the College for faculty recruitment, retention, and research.

4. The East Tennessee State University College of Medicine admitted an entering class of 54 students for the scholastic 1982-83 year and is projected to admit 72 students per year as soon as its accrediting agency will approve that number. The College was built and staffed to serve 72 students per class and would not be cost effective if less than 60 students per class were admitted based upon the diseconomy of scale. If state appropriations are to ensure a fully accredited, quality medical education program at East Tennessee State University, the size of the entering class should be maintained at 60 (when the Liaison Committee on Medical Education approves the increase from the present entering class of 54).
5. The University of Tennessee College of Veterinary Medicine was projected to admit a class of 80 students per year but presently is admitting 60 students per year. The entering enrollment of the College should be maintained at the present level of 60 and state appropriations should continue on an equitable basis (see Recommendation D. 2. on page 488). The funding level should ensure a quality, accredited veterinary medicine program.
6. The Memphis State University School of Law should reduce its entering class enrollments at the rate of 10 percent per year until the entering classes reach 100 full-time students per year and 50 part-time students per year. As a funding incentive to

improve quality, state appropriations would be maintained rather than decreased due to the student reductions. The funds realized would be available for reallocation within the School for faculty recruitment, retention, and research.

7. The University of Tennessee College of Law should reduce its entering class enrollment at the rate of approximately 10 percent per year until the entering class reaches 140 students per year. As a funding incentive, state appropriations would be maintained rather than decreased due to the student reductions. The funds realized would be available for reallocation within the College for faculty recruitment, retention, and research.

8. The University of Tennessee Board of Trustees and the State Board of Regents will continue to ensure that the professional schools in their systems will maintain the levels of quality required by the appropriate accrediting agencies, and the Governor and the General Assembly should continue to appropriate the funds necessary to ensure this quality standard.

9. Each public professional school should be encouraged by the Governor and the General Assembly to continue high standards of student admission and to maintain high scholastic standards throughout the professional education experience.

10. After qualified Tennessee students are served, the consideration of admitting highly qualified nonresidents could improve the overall quality of enrollment in the professional schools. The feasibility of allocating additional professional school spaces for nonresident students should be seriously considered by the Governor and the General Assembly.

IV. FUND DISTRIBUTION

How well do the present procedures of fund distribution serve each level of public education?

A. Grades K-12

1. An effective computerized program cost accounting system should be installed at the school district level to provide accurate and timely school and school district data needed by the school districts and by the state. Such a system is fundamental for determining fiscal requirements for meeting educational program needs, allocating the necessary funds, monitoring program implementation, evaluating the results, and planning improvements.
2. The state should renew, update, and publish each year a comprehensive review and analysis: of the costs of educational programs defined, mandated, or funded by the state; of public school finance trends; and of major problems and issues in financing the public schools, their underlying causes, and alternatives for their solution. This information is vital for those who make policy and other decisions about financing the public schools.
3. The pupil weightings used in the foundation program in allocating funds among programs should be continuously monitored to keep them accurate and fair. The single add-on weighting used for the additional costs for the education of children with handicapping conditions should be replaced with weightings that accurately reflect the costs for services for the various handicapping conditions.

4. The measure of the relative taxpaying ability of Tennessee counties used in the foundation program to determine each county's local contribution to the TFP is inaccurate and should be replaced for the 1983-84 school year. The procedure set forth in Financing Public Schools in Tennessee in the section on Relative Taxpaying Ability of Tennessee Counties is recommended (Table C-20 in Appendix C).
5. Specific provisions for meeting the costs of maintenance and operation of school plants should be provided on a per pupil ADA basis or on a categorical funding basis within the TFP.
6. The textbook allocation should be brought within the foundation program since it is closely related to other teaching materials and instructional programs now in the TFP, provided there is no reduction in the dollar amount per pupil.
7. The State Department of Education should encourage local boards of education to develop plans for the utilization or disposal of surplus buildings or space based on enrollment projections.
8. Local school boards should work with other community agencies in developing plans for underutilized facilities.

Long-Term

1. In long-range planning for financing the public schools, the state should plan for the replacement of funds for present federal programs of proven quality and success if the federal government should further drastically reduce or discontinue its funding for these programs.
2. The General Assembly should establish a goal of funding in the foundation program the full necessary costs of all basic programs

in the public schools, kindergarten through grade 12. The state should do the necessary planning and make the needed financial arrangements to accomplish this goal. The state should plan for and establish an improved tax base for the public schools that is equitable, progressive, and responsive to economic growth and will produce the revenue to fully fund on an equalization basis the programs considered necessary and desirable in the public schools, kindergarten through grade 12. The Governor and the General Assembly should appoint a task force composed of legislators and leading citizens to develop an action plan for the implementation of this recommendation within a three-year period.

3. Longstanding guarantee provisions in the foundation program for operational or pupil transportation funds should be phased out within a five-year period. Guarantee funds for capital outlay should be phased out within a five-year period or the life of existing bonds for which such revenue has been pledged.

B. Vocational-Technical Fund Distribution

1. Although there has been constant growth in federal funds to the state since 1972, during the last five years a steady decline in real dollar value has occurred. The General Assembly and governing boards should be aware of this and stand ready to explore alternative funding sources for vocational education to replace the lost federal dollars.
2. The State Board for Vocational Education should increase its efforts in seeing that districts or counties with limited fiscal capacity receive a large enough share of federal funds to

significantly improve their ability to provide programs of high quality.

3. If the distribution of federal funds is to be partly based on a uniform approval method of reporting placement, all institutions eligible to receive these funds should have input into the development of the definition of placement and the method by which placement is reported.
4. Well developed articulation plans should be initiated by co-located institutions for future planning. This should prevent any unnecessary duplication and provide information regarding what should be duplicated based on local needs.
5. Institutions with low enrollments should actively pursue vocational-technical training agreements with business and industry.
6. The appropriate governing boards should encourage the institutions to develop a realistic equipment replacement schedule, continuously updated with two, five, and ten-year projections. The General Assembly should give careful consideration to providing funds for this replacement schedule.
7. Efforts should be made by the governing boards to promote training programs in the actual work setting by potential employers; this training should be coordinated by vocational-technical instructors and administrators.
8. High technology programs and equipment should be placed in those institutions whose missions best address the specific needs of high technology as well as business and industry.

9. Institutions and LEAs should spend federal funds for program improvement rather than program maintenance where possible.

10. The appropriate governing boards should monitor the success or progress of each educational delivery system and establish funding priorities based on the needs and the economic condition of the state.

11. The General Assembly should provide incentive monies for those institutions providing exceptional quality programs.

12. Institutions should be allowed to reallocate any funds saved by the reduction of programs resulting from increased articulation and coordination efforts with other institutions.

13. Students at area vocational-technical schools should pay a minimal tuition. An adequate grant program should be established to assure that those who may be unable to pay tuition would still be assured the opportunity to attend these institutions. In the collection of fees, efforts should be made to allow the revenue earned to go to the operating budget of the area school. The largest percentage of the extra revenues should be for instruction, equipment, and supplies.

14. Since the number of Tennesseans enrolled in vocational-technical education can affect the decisions as to whether business and industry settle in Tennessee, since unemployment is at its highest peak in forty years, since future needs will require more technicians and occupationally specific workers, and since the educational dollar in the state is buying less and less, caps or limitations on enrollment in any institution whose main mission is to provide training and upgrading for employment should be imposed only as a last resort.

C. Higher Education Fund Distribution

1. An incentive fund should be established for postsecondary institutions to receive additional monies for their centers of excellence.
2. The respective governing boards for postsecondary institutions should meet with the Tennessee Higher Education Commission (THEC) to discuss three alternatives to the formula, including: (1) slightly modify the current formula, including using SREB funding averages as the formula base, (2) use the ideal number of faculty per full-time student enrollment as an appropriations base incorporating the average SREB faculty salary, and (3) establish the optimum number of full-time students at each institution and base appropriations on SREB per full-time student expenditure. The THEC is to report the results of these discussions to the House and Senate Education Committees on April 1, 1983.
3. Incentives should be established to attract science and mathematics teachers such as scholarships or loans which would be forgiven over a three to five-year period during which the teacher taught mathematics or science in the state.
4. Incentives should be established for doctoral students in mathematics or science such as scholarships or loans which would be forgiven over a period of time while the candidates taught undergraduate students in either discipline in the state.
5. A standard monetary incentive should be provided to attract competent cooperating teachers for student teachers.
6. Additional salary monies should be provided for outstanding teachers at all levels to make the profession more competitive in the market place.

7. The overall ratio of tuition to state appropriations should be maintained at approximately 30 percent tuition to 70 percent state appropriations with a possible fluctuation of ±5 percent. The ratio of tuition to state appropriations required at a two-year institution should be lower than the ratio at a four-year institution.

Long-Term

1. Incentive monies should be provided for those who earn the rank of lead teacher to be allocated on a yearly basis over and above the regularly earned salary.
2. The higher education leadership should make a commitment to reach SREB funding averages.

D. Professional School Fund Distribution

1. The General Assembly will require a uniform accounting system for all higher education boards and institutions. The system should have the capability to provide an accurate, up-to-date record of revenue and expenditure transactions by program.
2. The Tennessee Higher Education Commission will devise an equitable formula by which the University of Tennessee College of Veterinary Medicine will receive state appropriations.
3. In order to keep highly qualified students in Tennessee, additional scholarships, grants, and loan forgiveness programs for particular areas of critical manpower shortages should be initiated by the Tennessee Higher Education Commission and submitted to the General Assembly and the Governor for funding. In the development of the programs, particular attention should be given to the recruitment of minority and low income students.

In the area of loans, a collection mechanism should be formulated to help ensure loan retirement through service or repayment.

4. The tuition level of the professional programs will be carefully reviewed, and the Tennessee Higher Education Commission will consider increasing the proportion of tuition as compared to state appropriations. A plan should be developed to ensure that the funds generated by the tuition increase for each professional school will be allocated to the respective professional school without a loss in appropriations.

5. Salaries for professional school instructional personnel will be periodically reviewed by the Tennessee Higher Education Commission to help ensure comparable compensation with similar instructional personnel in the Southern Region.

APPENDIX A

SENATE JOINT RESOLUTION NO. 56

by Hamilton

A RESOLUTION To create a task force to study the public education system in Tennessee in order to develop a long range plan for public education in this state and to make recommendations and report its findings to the Governor and the General Assembly.

WHEREAS, Tennesseans have always placed a high priority on quality educational opportunities that will lead to a higher standard of living for Tennesseans as well as progressive economic growth for the state; and

WHEREAS, Public education in Tennessee is the largest consumer of state revenues requiring 49% of the projected revenues in the 1981-82 budget for the state; and

WHEREAS, Tennessee has one of the most comprehensive public education systems in the nation from kindergarten through graduate and professional schools including systems of comprehensive high school vocational technical centers, area vocational technical schools, technical institutes, community colleges, and universities; and

WHEREAS, It is the duty and responsibility of the legislative and executive branches of state government to insure that Tennesseans will continue to have access to quality education at a reasonable cost; and

WHEREAS, The Sixty-eighth, Seventy-fourth, and Seventy-ninth General Assemblies of the State of Tennessee provided for comprehensive studies of the Tennessee public education system in 1933, 1945, and 1955; and

WHEREAS, Progressive leadership and fiscal responsibility require a long range plan for the continued maintenance and development of Tennessee's system of public education; now, therefore,

BE IT RESOLVED BY THE SENATE OF THE NINETY-SECOND GENERAL ASSEMBLY OF THE STATE OF TENNESSEE, THE HOUSE OF REPRESENTATIVES CONCURRING, That there is hereby created a task force to make a comprehensive study of the entire public education system in Tennessee. The task force shall be composed of the following members: two (2) members from each of the following boards appointed by their respective chairmen--the State Board of Education, the State Board of Regents, the University of Tennessee Board of Trustees, and the Tennessee Higher Education Commission; four (4) private citizens appointed jointly by the Speaker of the Senate and the Speaker of the House of Representatives; one (1) person representative of the interest of Vocational-Technical Education, appointed by the Commissioner of Education; one (1) representative elected by each of the following organizations--the Tennessee Organization of Parents and Teachers, the Tennessee School Board Association, the Tennessee Organization of School Superintendents, and the Tennessee Education Association; and an equal number of members from the Senate and House Education Committees.

BE IT FURTHER RESOLVED, That the duties of the task force shall be to develop a long-range plan for public education in Tennessee and in doing so shall include but not be limited to an assessment of the current state of public education, kindergarten through graduate and professional schools, a statement of the goals and objectives of Tennessee's public education system, a description of the problem areas in Tennessee's public education, and recommendations to address the problem areas identified. Areas to be investigated shall include, but not limited to, programs, staffing/personnel, facilities, finances, and organization.

BE IT FURTHER RESOLVED, That it is the intent of the General Assembly that the task force utilize as much as possible the staff and resources of existing state agencies including, but not limited to, the Fiscal Review Committee, Comptroller of the Treasury, State Board of Regents, University of Tennessee, Department of Education, Higher Education Commission, Department of Finance and Administration, Office of Legislative Services, Office of Legal Services; and such agencies are directed to provide such assistance at the direction of the Chairman of the task force.

BE IT FURTHER RESOLVED, That the task force shall elect a chairman, a vice chairman and a secretary from its membership, provided that the chairman and vice chairman shall be from different political parties; the task force may establish such committees and subcommittees as it deems necessary to accomplish its work; the task force shall give attention at all levels to assure appropriate representation by minority groups.

BE IT FURTHER RESOLVED, That all legislative members of the task force shall be paid for attending meetings of the committee as members of the General Assembly are paid for attending legislative meetings as provided in Tennessee Code Annotated, Section 3-1-106.

BE IT FURTHER RESOLVED, That all nonlegislative members of the task force shall not be paid a salary but shall be paid for attending meetings of the committee as provided by the Comprehensive Travel Regulations promulgated by the Department of Finance and Administration.

BE IT FURTHER RESOLVED, That the task force may spend such sums as are appropriated to it for the purpose of providing staff, office space and equipment, travel expenses, compensation or travel expenses for outside consultants or experts, and printing; provided, however, that the total of all funds expended by the task force shall not exceed three hundred thousand dollars ($300,000) and shall be subject to the approval of the Speaker of the Senate and the Speaker of the House of Representatives.

BE IT FURTHER RESOLVED, That funding shall be subject to the appropriations bill.

BE IT FURTHER RESOLVED, That the Speakers are hereby directed to name the task force members no later than June 1, 1981 and that the task force shall report its findings and recommendations to the Governor and to the General Assembly no later than December 1, 1982.

ADOPTED: May 27, 1981
APPROVED: June 12, 1981

HOUSE JOINT RESOLUTION NO. 471

by Lashlee

A RESOLUTION to provide for an extension of the reporting date of the task force on education, as set by Senate Joint Resolution No. 56

BE IT RESOLVED BY THE HOUSE OF REPRESENTATIVES OF THE NINETY-SECOND GENERAL ASSEMBLY OF THE STATE OF TENNESSEE, THE SENATE CONCURRING, That, notwithstanding the date set in the last resolving clause of Senate Joint Resolution No. 56, the task force on education shall have until January 1, 1983, to report its findings and recommendations to the Governor and the General Assembly.

BE IT FURTHER RESOLVED, That a copy of this Resolution be sent to Dr. William H. Payne, Director of the Task Force, 16th Floor, James K. Polk State Office Building.

TENNESSEE COMPREHENSIVE EDUCATION STUDY
SUBCOMMITTEE RESEARCH TOPIC OUTLINES

TENNESSEE PUBLIC EDUCATION KINDERGARTEN THROUGH GRADE TWELVE

Examination of Public School Goals

Organization and Governance

Quality of Instruction

Funding Distribution

School Facilities

TENNESSEE PUBLIC VOCATIONAL-TECHNICAL EDUCATION

Examination of Vocational-Technical Education Goals

Organizational Structure and Governance

Quality of Instruction

Funding Distribution

TENNESSEE PUBLIC HIGHER EDUCATION

Examination of Higher Education Goals

Organization and Governance

Teacher Education

Quality of Instruction

Funding Distribution

SELECTED TENNESSEE PUBLIC PROFESSIONAL SCHOOLS

Review Schools of: Medicine, Dentistry, Law, Veterinary Medicine

Quality Indicators

Funding

Professional Manpower

APPENDIX B

Table B-1

1980 TENNESSEE PER CAPITA INCOME BY STATE, SMSA, AND COUNTY

Area	1980 Per Capita Income	1980 Rank in State
Tennessee	$7,702	
SMSA		
Memphis	8,696	2
Knoxville	8,340	3
Nashville	8,821	1
Tri-Cities	7,147	5
Clarksville	6,903	6
Chattanooga	8,118	4
County		
Anderson	9,464	2
Bedford	7,471	14
Benton	6,676	34
Bledsoe	4,505	89
Blount	7,801	8
Bradley	7,239	20
Campbell	5,700	63
Cannon	6,273	48
Carroll	6,687	33
Carter	5,565	68
Cheatham	6,322	46
Chester	4,954	84
Claiborne	5,497	69
Clay	4,873	85
Cocke	5,272	75
Coffee	7,690	10
Crockett	5,853	61
Cumberland	5,427	71
County		
Davidson	$10,018	1
Decatur	5,696	64
Dekalb	6,145	53
Dickson	6,698	32
Dyer	6,777	31
Fayette	4,397	91
Fentress	4,215	92
Franklin	6,065	55
Gibson	6,239	49
Giles	7,342	16
Grainger	5,136	79
Greene	6,395	42
Grundy	4,758	86
Hamblen	6,427	40
Hamilton	9,005	4
Hancock	4,108	93
Hardeman	5,228	77
Hardin	6,037	57
Hawkins	5,610	67
Haywood	5,669	65
Henderson	5,621	66
Henry	7,212	21
Hickman	6,151	52
Houston	6,394	43
Humphreys	7,205	22
Jackson	4,572	88
Jefferson	6,646	35
Johnson	5,882	60

(continued)

Table B-1 (continued)

Area	1980 Per Capita Income	1980 Rank in State	Area	1980 Per Capita Income	1980 Rank in State
County			County		
Knox	$8,357	7	Rhea	$7,639	12
Lake	5,260	76	Roane	5,848	62
Lauderdale	5,294	73	Robertson	7,275	18
Lawrence	6,921	29	Rutherford	7,159	23
Lewis	5,009	81	Scott	5,191	78
Lincoln	6,298	47	Sequatchie	4,997	82
Loudon	7,156	24	Sevier	6,968	27
McMinn	6,512	38	Shelby	9,076	3
McNairy	5,888	59	Smith	6,363	45
Macon	6,572	37	Stewart	6,080	54
Madison	7,672	11	Sullivan	8,397	5
Marion	6,504	39	Sumner	7,115	25
Marshall	7,243	19	Tipton	6,164	51
Maury	7,528	13	Trousdale	7,066	26
Meigs	6,041	56	Unicoi	6,611	36
Monroe	5,126	80	Union	4,983	83
Montgomery	6,963	28	Van Buren	3,892	95
Moore	6,392	44	Warren	6,783	30
Morgan	4,436	90	Washington	7,468	15
Obion	7,778	9	Wayne	5,291	74
Overton	4,731	87	Weakley	5,894	58
Perry	5,489	70	Shite	5,391	72
Pickett	4,080	94	Williamson	8,385	6
Polk	6,210	50	Wilson	7,292	17
Putnam	6,405	41			

Source: Bureau of Economic Analysis, Survey of Current Business, April 1982.

Table B-2

1980 U.S. PER CAPITA INCOME BY STATE AND AS PERCENTAGE OF TENNESSEE PER CAPITA INCOME

Area	1980 Per Capita Income	Rank in U.S.	Percent of Tennessee Per Capita Income
New England			
Maine	$ 7,868	39	102
New Hampshire	9,119	26	118
Vermont	7,810	43	101
Massachusetts	10,118	12	131
Rhode Island	9,429	20	122
Connecticut	11,692	2	151
Mideast			
New York	10,252	11	133
Pennsylvania	9,427	21	132
New Jersey	10,935	3	141
Delaware	10,291	10	133
Maryland	10,477	8	136
Great Lakes			
Ohio	9,460	19	122
Indiana	8,924	30	116
Illinois	10,479	7	136
Michigan	9,967	15	129
Wisconsin	9,413	22	122
Southeast			
West Virginia	7,814	42	101
Virginia	9,406	23	122
Kentucky	7,662	46	99
North Carolina	7,832	40	102
South Carolina	7,265	48	94
Georgia	8,041	37	104
Florida	8,993	29	117
Alabama	7,434	47	96
Tennessee	7,702	44	100
Mississippi	$ 6,557	50	85
Arkansas	7,185	49	93
Louisiana	8,456	35	110
Plains			
Minnesota	9,765	17	127
Iowa	9,310	24	121
Missouri	8,865	31	115
Kansas	9,864	16	128
Nebraska	9,086	27	118
South Dakota	7,818	41	101
North Dakota	8,626	34	112
Southwest			
Oklahoma	9,066	28	118
Texas	9,528	18	124
New Mexico	7,878	38	102
Arizona	8,814	32	114
Rocky Mountain			
Montana	8,652	33	112
Idaho	8,176	36	106
Colorado	10,033	14	130
Wyoming	10,875	5	141
Utah	7,681	45	99
Far West			
Washington	10,355	9	134
Oregon	9,296	25	121
Nevada	10,723	6	139
California	10,929	4	142
Alaska	12,759	1	166
Hawaii	10,091	13	131

Source: Bureau of Economic Analysis, Survey of Current Business, April 1982.

Table B-3

TENNESSEE ANNUAL AND PER CAPITA GROSS STATE PRODUCT AND PER CAPITA INCOME, 1980-1990

(million $)

	Gross State Product		Per Capita Gross State Product		Per Capita Income	
Year	Current $	1972 $	Current $	1972 $	Current $	1972 $
1980	$ 45,870	$26,685.9	$ 9,967	$5,799	$ 7,720	$4,315
1981	50,282	26,910.5	10,818	5,790	8,468	4,365
1982	54,698	27,017.2	11,611	5,735	9,187	4,340
1983	61,377	28,068.5	12,835	5,870	10,045	4,400
1984	68,934	29,236.7	14,230	6,035	11,013	4,477
1985	76,633	30,184.3	15,656	6,167	12,099	4,569
1986	84,050	30,710.5	17,015	6,217	13,337	4,655
1987	92,783	31,596.3	18,595	6,332	14,673	4,772
1988	102,721	32,636.4	20,398	6,481	16,117	4,921
1989	113,826	33,735.8	22,397	6,638	17,741	5,060
1990	126,112	34,882.0	24,567	6,794	19,517	5,209

Source: Tennessee Econometric Model, Center for Business and Economic Research, The University of Tennessee, Knoxville.

APPENDIX C

CHART C-1

Financing Public Schools, K-12 In Florida, 1982-83

Basic State Support

FOUNDATION PROGRAM
$1,397.337 per weighted FTE pupil State aid adjusted by a district differential cost index based on a three year average of prices of a defined market basket in the various counties, a factor ranging from .9511 to 1.07 depending on the county. Districts guaranteed funding per weighted pupil equal to the previous year plus inflation factor (10 percent in net dollars in 1982-83).
Total foundation program cost - $2,816,976,559.
Number of FTE pupils 1,602,376.
(Average amount per unweighted FTE pupil $1,758).
Required local effort, 3.878 mills, applied to property valuation. Local share - $833,000,000.
State share of cost of foundation program - $1,987,976,559.
State share average cost per FTE pupil $1,240.64.

MAXIMUM LOCAL LEEWAY ALLOWED, 1.6 mills on property.

GUARANTEED TAX BASE (POWER EQUALIZING)
Outside the foundation program the part of local tax rates for schools above 1.1 mills and up to the 1.6 mills maximum local leeway equalized to the state average per pupil.

STATE CATEGORICAL FUNDS
Pupil transportation - on the basis of miles traveled and pupils transported $72 + million.
Instructional materials including textbooks - $21 per pupil for regular pupils and $84 per pupil for new pupils - $81 million.
Compensatory education - $33 + million.
Primary education - Reduce teacher load in K-3 - $70 + million.
Compensatory education - $33 + million.
Capital outlay - two appropriations - One allocated in proportion to unmet school plant needs, the other on the basis of units calculated by dividing by 23 and multiplying by $400 for regular students, and by $600 for growth from base year.

Grade Level Adjustments

Grade	Weight
K-3	1.165
4-9	1.000
10-12	1.106

Educational Program Adjustments

Exceptional Education:

	Weight
Educable Mentally Handicapped	2.149
Trainable Mentally Handicapped	2.832
Physically Handicapped	3.472
Physical Occupational therapy part-time	6.674
Speech and Hearing part-time	6.870
Deaf	3.835
Visually Handicapped part-time	11.393
Visually Handicapped full time	4.248
Emotionally Handicapped part-time	5.094
Regularly Emotionally Handicapped full time	3.242
Specific Learning Disabilities part-time	4.391
Specific Learning Disabilities full time	2.347
Gifted part-time	2.247
Hospital and Homebound	13.295
Profoundly Handicapped	4.843

Vocational Education:

	Weight
Agriculture	1.991
Home Economics	1.588
Health Occupations	1.967
Trade-Industrial Occupations	2.013
Distributive Occupations	1.414
Office Occupations	1.475
Diversified Occupations	1.381
Public Service	1.975
Exploratory	1.390

Revenue by Source 1980-81

Amount	
Federal	$389,296,931
State	$2,097,372,364
Local	$1,298,182,841

Percent	
Federal	10.3
State	55.4
Local	34.3

Prepared by James E. Gibbs with the assistance of the Florida Department of Education, Financial Management Section.

CHART C-2

Financing Public Schools, K-12 In South Carolina, 1982-83

Basic State Support*

FOUNDATION PROGRAM
$1,046 per weighted pupil in ADM.
Required local effort -- Index of local district's relative fiscal ability based on full market value of taxable property times 30 percent of the statewide cost of the foundation program.
Number of pupils ADM 608,218.
Total Cost of foundation program - $758,458,177.
Average amount per pupil ADM $1,247.01.
State share of foundation program - $532,486,478.
Average amount per pupil ADM $875.48.
Local share of foundation program - $225,971,699.
Average amount per pupil ADM $371.53.

STATE CATEGORICAL FUNDS
Free Textbooks - State provided and operated - $9,561,818.
Pupil Transportation - State provided and operated - $44,189,942.
Child Development and Day Care - $2,870,206.
School Food Service Program Aid - $526,000.
Program for Gifted and Talented - $1,618,395.
Public School Employee Fringe Benefits - $133,000.
County Superintendent's Salary - $14,650 only for 12 counties.
County Lunchroom Supervisor - $10,518 per county (46 counties).
County Attendance Supervisor - $10,518 per county.
School Building Aid $30 per student enrolled.
Grades 1-12; $15 per kindergarten pupil.
Public School Employee Fringe Benefits - $134,668,687 - For state's share of teacher retirement, social security, and health insurance program.
Teacher Incentive Program - $7,800,000.
Payments to school districts for instructional staff with masters degrees or better, in excess of 25 percent, the proportion of $2,000 for each such staff member that the state pays of the foundation program.

Grade Level Adjustments

Grade	Weight
K	1.30
1-3	1.30
4-8	1.00
9-12	1.25

Educational Program Adjustments

Exceptional Education	
Educable Mentally Handicapped	1.74
Learning Disabilities	1.74
Trainable Emotionally Handicapped	2.04
Orthopedic Handicapped	2.04
Visually and Hearing Handicapped	2.57
Speech Handicapped	1.9
Homebound	2.1

Vocational Education
A single weight for all vocational students: 1.29

Revenue by Source 1980-81

Amount	
Federal	$172,028,512
State	$673,803,137
Local	$407,873,704

Percent	
Federal	14
State	54
Local	32

*State facing a possible 4.58% budget cut.

Prepared by James E. Gibbs, with the assistance of the South Carolina Department of Education, Division of Auditing and Field Services.

CHART C-3

Financing Public Schools, K-12 In Kentucky, 1982-83

Basic State Support	Grade Level Adjustments	Educational Program Adjustments	Revenue by Source 1980-81
FOUNDATION PROGRAM For 1982-83 an average amount of $17,805.08 per classroom unit provided for instructional salaries, $3,750 for other current expenses, and $1,800 for capital outlay. (Note: For 1983-84 the amount per classroom unit is $19,268.49 for instructional salaries, $4,130 for other current expenses, and $1,800 for capital outlay). Educational need is calculated in terms of classroom units for eight categories: basic classroom instruction, vocational education, exceptional children, kindergarten, administrative and special instructional service, superintendents, supervisors of instruction, and directors of pupil personnel. Classroom units for basic classroom instruction, vocational education, exceptional children, and kindergarten serve as the basis for calculating the number of units for administration and special instruction services, and for supervisors of instruction. Units for directors of pupil personnel computed on the basis of total units for basic classroom instruction. Additional units compensate for any increase in ADA during first 2 months of current school year over first 2 months of the previous year. Total Number of Pupils ADA 577,903. Total Foundation Program Cost $811,449,500. Average cost per pupil ADA $1,416.38. Required Local Contribution: None STATE CATEGORICAL FUNDS Vocational Education Transportation - $1,785,400. Textbooks - purchased at state level. POWER EQUALIZATION PROGRAM In addition to the State supported foundation program an amount of $37,550,000 is appropriated in 1982-83 to guarantee (to the extent that the appropriation will support) that each county's local tax rate for schools will produce as much per child as in the county with the highest wealth per pupil. (Approximately 85 cents per $100.00 of equalized property value.)	Grades K (Not mandatory) and 1-3 earn a classroom unit per 25 ADA during the previous school year. Grades 4-12 earn a classroom unit per 27 ADA during the prior year. Additional units for supervision. One superintendent and one ASIS (administrative and special instruction services) for each nine of above.	Exceptional Education Classroom units are allotted per approved teacher, not to exceed the total provided in the biennial budget. The ADA for each unit allocated deducted from basic allocation. Vocational Education Vocational education units are allotted for vocational instruction. School districts apply for these units. The vocational portion of ADA is deducted from the basic allocation.	Amount Federal $163,805,033 State 745,147,198 Local 232,968,534 Percent. Federal 14.3 State 65.3 Local 20.4

repared by James E. Gibbs with the assistance of the Kentucky Department of ducation, Bureau of Administration and Finance.

TABLE C-1

GOAL RANKINGS BY GROUPS AND COMBINED GROUP RANK

Goal	Group 1 Rank	Group 2 Rank	Group 3 Rank	Group 4 Rank	Comb. Group* Rank
1. Develop skills and attitudes which facilitate learning.	2	2	2	2	2
2. Have sufficient information to realize his/her life goals.	11	11	11	12	10-11
3. Know the principles, habits and attitudes conducive to good physical and mental health.	9	10	9	8.5	9
4. Establish and maintain satisfactory relationships with other persons.	8	7	9	8.5	8
5. Know and practice the basic requirements of responsible citizenship.	7	6	7	7	7
6. Have competence in the use of natural resources and in the maintenance of ecological balance.	20	17	20	19	20
7. Acquire career information and economic competence.	15	15	15	13	15
8. Appreciate cultural and aesthetic values.	16	19	17	20	17-18
9. Be aware of the increasing interdependence among people and nations of the world.	17	16	16	17	16
10. Have competence in the fundamentals of mathematical concepts, principles and skills.	4	3	3	6	3
11. Learn how to respect and get along with people who think, dress and act differently.	10	12	13	11	12
12. Learn about and try to understand the changes that take place in the world.	18	20	18	16	17-18
13. Develop skills in reading, writing, speaking and listening.	1	1	1	1	1
14. Understand and practice democratic ideas and ideals.	12	9	9	15	10-11
15. Understand and practice the skills of family living.	14	13	12	14	14
16. Develop skills to enter a specific field of work.	13	14	14	10	13
17. Learn how to use leisure time.	19	18	19	18	19
18. Develop pride in work and a feeling of self-worth.	5	4.5	4	3	4-5
19. Develop good character and self-respect.	3	4.5	5	4	4-5
20. Gain a general education.	6	8	6	5	6

*Average of the four groups.

TABLE C-2

GOAL RANKINGS BY TOTAL RESPONDENTS AND COMBINED GROUPS

Goal	Rank Total Respondents	Rank Combined Groups
Develop skills in reading, writing, speaking, and listening.	1	1
Develop skills and attitudes which facilitate learning.	2	2
Develop pride in work and a feeling of self-worth.	3	4-5
Have competence in the fundamentals of mathematical concepts, principles, and skills.	4	3
Develop good character and self-respect.	5	4-5
Gain a general education.	6	6
Know and practice the basic requirements of responsible citizenship.	7	7
Establish and maintain satisfactory relationships with other persons.	8	8
Know the principles, habits, and attitudes conducive to good physical and mental health.	9	9
Have sufficient information to realize his/her life goals.	10	10-11
Understand and practice democratic ideas and ideals.	11	10-11

TABLE C-3

Department of Education
Authorized Positions

Allotment Code	Program	No. Positions
331.01	Administration	147
331.03	ECIA, Chapter II, Consolidated Grants	44
331.04	Tennessee Tomorrow	1
331.07	State Board	14
331.09	Improvement of School Personnel	2
331.19	Commission on Post Secondary Education	1
331.33	ECIA, Chapter I, Compensatory Education	27
331.35	School Food Services	23
331.36	Services to Handicapped Children	40
331.42	Educational Television	80
331.45	Vocational Technical Education	78
331.48	CETA	14
331.49	Vocational Education Advisory Council	3
331.51	Area Vocational Schools	676
331.61	Adult Basic Education	8
331.62	Veterans Education	9
331.70	Vocational Rehabilitation	602
331.71	Disability Determination	288
331.73	Tennessee Council for Hearing Impaired	3
331.90	Alvin C. York Institute	52
331.91	Tennessee School for the Blind	145
331.92	Tennessee School for the Deaf	268
331.93	West Tennessee Center for the Deaf	7
331.94	Tennessee Preparatory School	283
	Subtotal	2,815*

State Technical Institutes (full time)

Memphis	311
Nashville	203
Knoxville	138
Tri-Cities	129
Subtotal	781
Total DOE Authorized Positions	3,596

NOTE: At last count, 6.74% of these positions were vacant.

October 8, 1982

DOE Positions Working with K-12 Programs
(Directly or Indirectly)

Allotment Code	Program	No. Positions
331.01	Administration	147
331.03	ECIA, Chapter II, Consolidated Grants	44
331.04	Tennessee Tomorrow	1
331.07	State Board	14
331.09	Improvement of School Personnel	2
331.33	ECIA, Chapter I, Compensatory Education	27
331.35	School Food Services	23
331.36	Services to Handicapped Children	40
331.42	Educational Television	80
331.45	Vocational Technical Education	78
331.49	Vocational Education Advisory Council	3
	Total	459

October 8, 1982

TABLE C-5

COST PROJECTIONS I

1984-85

	Kindergarten (NOT MANDATORY)	Kindergarten (MANDATORY)	Difference
Total Number of Projected 5 year olds	70,342	70,342	--
Projected Number of Kindergarten Students	61,648	66,864	5,216
Estimated Number of Teachers Based on 25 to 1 pupil/teacher ratio	2,466	2,675	209
Estimated Total Average Salary for Teachers (includes State Retirement)	$23,617.57	$23,617.57	--
Total Salary Cost for Teachers	$58,240,928	$63,177,000	$4,936,072
State Share	$44,845,515	$48,646,290	$3,800,775
Local Share	$13,395,413	$14,530,710	$1,135,297
Estimated Expenditure Per Student (includes State Teacher Retirement)	$3,071	$3,071	--
*Total Cost equals Estimated Number of Students times Estimated Expenditure Per Student	$189,321,008	$205,339,344	$16,018,336
State Share	$ 92,767.294	$100.616.279	$ 7,848,985
Local Share	$ 81,408,033	$ 88,295,918	$ 6,887,884

NOTE: The difference between the 70,342 projected 5 year olds and the 61,648 projected public kindergarten students is 8,694 children. These 8,694 children will either be enrolled in private kindergarten or will not be participating in the kindergarten program. An assumption was made that 60 percent of these 8,694 students will attend public kindergarten if the program becomes mandatory.

* Total Cost includes: Administration Instruction, Pupil Transportation, Operation of Plant, Maintenance of Plant, Fixed Charges, and Expenditures for Other Services Allocable to Current Costs.

October 8, 1982

TABLE C-6

COST PROJECTIONS II

1984-85

	Kindergarten (NOT MANDATORY)	Kindergarten (MANDATORY)	Difference
Total Number of Projected 5 Year Olds	70,342	70,342	--
Projected Number of Kindergarten Students	62,680	67,277	4,597
Estimated Number of Teachers Based on 25 to 1 pupil/teacher ratio	2,507	2,691	184
Estimated Total Average Salary for Teachers (includes State Teacher Retirement)	$23,617.57	$23,617.57	--
Total Salary Cost for Teachers	$59,209,248	$63,554.881	$4,345,633
State Share	$45,591,121	$48,937,258	$3,346,137
Local Share	$13,618,127	$14,617,623	$ 999,496
Estimated Expenditure Per Student (includes State Teacher Retirement)	$3,071	$3,071	--
Total Cost equals Estimated Number of Students times Estimated Expenditure Per Student	$192,490,280	$206,607,667	$14,117,387
State Share	$ 94,320,237	$101,237,757	$ 6,917,520
Local Share	$ 82,770,820	$ 88,841,297	$ 6,070,476

NOTE: The difference between the 70,342 projected 5 year olds and the 62,680 projected public kindergarten students is 7,662. These 7,662 children will be enrolled in private kindergarten or will not be participating in the kindergarten program. An assumption was made that 60 percent of these 7,662 students will attend public kindergarten if the program becomes mandatory.

*Total Cost includes: Administration Instruction, Pupil Transportation, Operation of Plant, Maintenance of Plant, Fixed Charges, and Expenditures for Other Services Allocable to Current Costs.

October 8, 1982

TABLE C-7

WEALTH EQUALIZATION EFFECTS RESULTING FROM INCLUDING IN THE TENNESSEE FOUNDATION PROGRAM, $54,120,717 AS THE LOCAL SHARE AND USING EQUALIZED ASSESSMENTS AS THE MEASURE OF LOCAL ABILITY, 1980-81

RANK	DISTRICTS Ranked by State-Local Funds Per Adjusted WFTEADA	NET FTEADA	WFTEADA ADJUSTED*	STATE SHARE OF TFP PER PUPIL WFTEADA ADJUSTED*	LOCAL SHARE OF TFP PER WFTEADA ADJUSTED*	WEALTH EQUALIZATION PER PUPIL WFTEADA ADJUSTED*	AMOUNT OF WEALTH EQUALIZATION PER DISTRICT
1	Alcoa	1,319	2,297	$ 351	$ 39	$ 28	$ 64,316
2	Kingsport	5,410	9,734	340	50	17	165,478
3	Oak Ridge	4,888	8,924	368	22	45	401,580
4	Bristol	3,916	6,889	337	53	14	96,446
5	Davidson	65,509	118,653	323	67	-0-	-0-
6	Chattanooga	25,296	43,051	337	52	15	645,765
7	Memphis	105,944	181,054	343	47	20	3,621,080
8	Knoxville	26,244	46,350	352	38	29	1,344,150
9	Elizabethton	2,666	4,397	367	23	44	127,510
10	Hamilton	20,406	33,266	336	54	13	432,458
11	Paris	1,268	2,069	355	35	32	66,208
12	Murfreesboro	2,827	4,537	355	35	32	145,184
13	Sullivan	18,429	29,609	334	56	11	325,699
14	Knox	27,504	45,719	350	39	28	1,280,132
15	Covington	878	1,354	365	25	42	56,868

TABLE C-7

WEALTH EQUALIZATION EFFECTS RESULTING FROM INCLUDING IN THE TENNESSEE FOUNDATION PROGRAM, $54,120,717 AS THE LOCAL SHARE AND USING EQUALIZED ASSESSMENTS AS THE MEASURE OF LOCAL ABILITY, 1980-81

RANK	DISTRICTS Ranked by State-Local Funds Per Adjusted WFTEADA	NET FTEADA	WFTEADA ADJUSTED*	STATE SHARE OF TFP PER PUPIL WFTEADA ADJUSTED*	LOCAL SHARE OF TFP PER WFTEADA ADJUSTED*	WEALTH EQUALIZATION PER PUPIL WFTEADA ADJUSTED*	AMOUNT OF WEALTH EQUALIZATION PER DISTRICT
16	Franklin-Special	2,325	3,516	$ 344	$ 46	$ 21	$ 73,836
17	Johnson City	5,805	9,770	353	37	30	293,100
18	Morristown	5,455	9,512	352	38	29	275,848
19	Montgomery-Clarksville	13,825	24,274	364	26	41	995,234
20	Greeneville	3,235	6,162	360	29	38	234,156
21	Tullahoma	3,164	6,113	367	23	44	268,972
22	Moore	858	1,427	343	47	20	28,540
23	Hamblen	4,400	6,596	350	40	27	178,092
24	Cleveland	4,398	7,308	356	34	33	241,164
25	Lenoir City	1,723	2,842	367	23	44	125,048
26	Maryville	2,846	4,900	352	38	29	142,100
27	Etowah	395	624	362	28	39	24,336
28	Manchester	1,179	2,050	366	24	43	88,150
29	Shelby	25,152	40,688	344	46	21	854,448
30	Clay	1,607	2,958	373	16	51	150,858

TABLE C-7

WEALTH EQUALIZATION EFFECTS RESULTING FROM INCLUDING IN THE TENNESSEE FOUNDATION PROGRAM, $54,120,717 AS THE LOCAL SHARE AND USING EQUALIZED ASSESSMENTS AS THE MEASURE OF LOCAL ABILITY, 1980-81

RANK	DISTRICTS Ranked by State-Local Funds Per Adjusted WFTEADA	NET FTEADA	WFTEADA ADJUSTED*	STATE SHARE OF TFP PER PUPIL WFTEADA ADJUSTED*	LOCAL SHARE OF TFP PER WFTEADA ADJUSTED*	WEALTH EQUALIZATION PER PUPIL WFTEADA ADJUSTED*	AMOUNT OF WEALTH EQUALIZATION PER DISTRICT
31	Rogersville	602	994	$ 360	$ 30	$ 37	$ 36,778
32	Union City	2,203	3,563	353	37	30	106,890
33	Bledsoe	1,644	2,752	363	27	40	110,080
34	Hollow Rock-Bruceton	862	1,408	368	22	45	63,360
35	Williamson	8,867	14,427	344	46	21	302,967
36	Lebanon	2,293	3,499	353	37	30	104,970
37	Henry	3,392	5,843	353	37	30	175,290
38	Harriman	2,105	3,791	359	31	36	136,476
39	Fayetteville	880	1,400	359	31	36	50,400
40	Dyersburg	3,343	6,004	351	38	29	174,116
41	Polk	2,938	5,027	326	64	03	15,081
42	Loudon	3,908	6,351	366	24	43	273,093
43	Sevier	7,790	12,433	340	50	17	211,361
44	Rutherford	13,283	21,983	354	36	31	681,473
45	Sequatchie	1,895	3,299	369	21	46	151,754

TABLE C-7

WEALTH EQUALIZATION EFFECTS RESULTING FROM INCLUDING IN THE TENNESSEE FOUNDATION PROGRAM, $54,120,717 AS THE LOCAL SHARE AND USING EQUALIZED ASSESSMENTS AS THE MEASURE OF LOCAL ABILITY, 1980-81

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46	Johnson Co.	2,587	4,273	$ 360	$ 29	$ 38	$ 162,374
47	Marshall	3,579	5,834	352	37	30	175,020
48	Huntingdon	1,471	2,448	368	21	46	112,608
49	Stewart	1,626	2,775	354	35	32	88,800
50	Athens	1,836	3,220	364	26	41	132,020
51	McMinn	6,030	10,479	359	31	36	377,244
52	Anderson	7,667	14,648	371	19	48	703,104
53	Newport	826	1,254	366	24	43	53,922
54	Morgan	3,432	5,434	365	25	42	228,228
55	Gibson	2,230	3,747	357	33	34	127,398
56	Maury County	9,237	15,578	351	39	28	436,184
57	Sumner	17,957	29,072	356	33	34	988,448
58	Trousdale	1,096	1,741	344	46	21	36,561
59	Obion	4,436	7,374	352	38	29	213,846
60	Washington	10,244	16,726	357	33	34	568,684

TABLE C-7

WEALTH EQUALIZATION EFFECTS RESULTING FROM INCLUDING IN THE TENNESSEE FOUNDATION PROGRAM, $54,120,717 AS THE LOCAL SHARE AND USING EQUALIZED ASSESSMENTS AS THE MEASURE OF LOCAL ABILITY, 1980-81

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61	Giles	4,532	7,593	$ 359	$ 31	$ 36	$ 273,348
62	Blount	10,605	18,063	348	42	25	451,575
63	Hardeman	5,096	8,223	362	27	40	328,920
64	Marion	4,894	8,233	368	22	45	370,485
65	Richard City	143	208	370	20	47	9,776
66	Smith	2,717	4,292	354	36	31	133,052
67	Humphreys	3,321	5,508	331	58	9	49,572
68	Dayton	688	1,041	361	29	38	39,558
69	Coffee	3,247	5,780	363	26	41	236,980
70	Van Buren	846	1,367	366	24	43	58,781
71	McNairy	4,172	6,773	357	32	35	237,055
72	Friendship	192	280	346	43	24	6,720
73	Lewis	1,623	2,586	360	30	37	95,682
74	Wilson	8,505	13,851	354	36	31	429,381
75	Trezevant	433	792	368	22	45	35,640

TABLE C-7

WEALTH EQUALIZATION EFFECTS RESULTING FROM INCLUDING IN THE TENNESSEE FOUNDATION PROGRAM, $54,120,717 AS THE LOCAL SHARE AND USING EQUALIZED ASSESSMENTS AS THE MEASURE OF LOCAL ABILITY, 1980-81

RANK	DISTRICTS Ranked by State-Local Funds Per Adjusted WFTEADA	NET FTEADA	WFTEADA ADJUSTED*	STATE SHARE OF TFP PER PUPIL WFTEADA ADJUSTED*	LOCAL SHARE OF TFP PER WFTEADA ADJUSTED*	WEALTH EQUALIZATION PER PUPIL WFTEADA ADJUSTED*	AMOUNT OF WEALTH EQUALIZATION PER DISTRICT
76	Carter	6,899	11,410	$ 368	$ 22	$ 45	$ 513,450
77	Putnam	8,089	13,411	352	37	30	402,330
78	Clinton	902	1,464	370	19	48	70,272
79	Hickman	2,799	4,780	353	37	30	143,400
80	Overton	3,402	5,454	366	24	43	234,522
81	Bradley	9,171	14,709	357	37	30	441,270
82	Decatur	1,889	3,187	364	26	41	130,667
83	Lake	1,473	2,554	357	33	34	86,836
84	Houston	1,403	2,326	364	26	41	95,366
85	Jackson - City	6,424	10,567	356	34	33	348,711
86	Cumberland	5,852	9,357	350	40	27	252,639
87	Robertson	6,941	12,351	368	22	45	555,795
88	Dickson	6,182	10,013	362	28	39	390,507
89	Hawkins	7,915	13,800	360	29	38	524,400
90	Dyer	3,544	5,749	349	41	26	149,474

TABLE C-7

WEALTH EQUALIZATION EFFECTS RESULTING FROM INCLUDING IN THE TENNESSEE FOUNDATION PROGRAM, $54,120,717 AS THE LOCAL SHARE AND USING EQUALIZED ASSESSMENTS AS THE MEASURE OF LOCAL ABILITY, 1980-81

RANK	DISTRICTS Ranked by State-Local Funds Per Adjusted WFTEADA	NET FTEADA	WFTEADA ADJUSTED*	STATE SHARE OF TFP PER PUPIL WFTEADA ADJUSTED*	LOCAL SHARE OF TFP PER WFTEADA ADJUSTED*	WEALTH EQUALIZATION PER PUPIL WFTEADA ADJUSTED*	AMOUNT OF WEALTH EQUALIZATION PER DISTRICT
91	Bedford	5,357	8,699	$ 354	$ 36	$ 31	$ 269,669
92	Tipton	5,632	8,722	371	27	40	348,880
93	Jackson-County	1,604	2,690	363	27	40	107,600
94	Claiborne	5,618	9,317	374	16	51	475,167
95	Benton	2,736	4,553	368	22	45	204,885
96	Humboldt	2,677	4,448	359	31	36	160,128
97	South Carroll County	383	681	367	22	45	30,645
98	Roane	6,704	11,589	356	33	34	394,026
99	Greene	7,335	11,623	357	33	34	395,182
100	Meigs	1,603	2,612	354	36	31	80,972
101	Warren	6,149	10,178	364	25	42	427,476
102	McKenzie	1,428	2,465	369	21	46	113,390
103	Sweetwater	1,242	1,878	364	37	30	56,340
104	Hardin	4,452	7,233	353	37	30	216,990
105	Monroe	4,715	7,946	365	24	43	341,678

TABLE C-7

WEALTH EQUALIZATION EFFECTS RESULTING FROM INCLUDING IN THE TENNESSEE FOUNDATION PROGRAM, $54,120,717 AS THE LOCAL SHARE AND USING EQUALIZED ASSESSMENTS AS THE MEASURE OF LOCAL ABILITY, 1980-81

RANK	DISTRICTS Ranked by State-Local Funds Per Adjusted WFTEADA	NET FTEADA	WFTEADA ADJUSTED*	STATE SHARE OF TFP PER PUPIL WFTEADA ADJUSTED*	LOCAL SHARE OF TFP PER WFTEADA ADJUSTED*	WEALTH EQUALIZATION PER PUPIL WFTEADA ADJUSTED*	AMOUNT OF WEALTH EQUALIZATION PER DISTRICT
106	Fentress	2,604	4,070	$ 363	$ 27	$ 40	$ 162,800
107	Cannon	1,824	3,015	371	19	48	144,720
108	Crockett Mills	265	376	351	39	28	10,528
109	Cheatham	4,500	7,413	369	21	46	340,998
110	Atwood	420	697	370	20	47	32,759
111	Rhea	4,146	6,922	360	29	38	263,036
112	Bradford	649	1,088	361	28	39	42,432
113	Franklin-County	6,010	10,081	367	23	44	443,564
114	Scott	2,769	4,977	368	21	46	228,942
115	Lincoln	4,233	7,423	361	29	38	282,074
116	Perry	1,107	2,135	351	39	28	59,780
117	Milan	2,183	3,909	361	29	38	148,542
118	Alamo	584	930	358	31	36	33,480
119	White	3,778	6,322	366	23	44	278,168
120	Unicoi	3,161	5,313	364	21	46	244,398

TABLE C-7

WEALTH EQUALIZATION EFFECTS RESULTING FROM INCLUDING IN THE TENNESSEE FOUNDATION PROGRAM, $54,120,717 AS THE LOCAL SHARE AND USING EQUALIZED ASSESSMENTS AS THE MEASURE OF LOCAL ABILITY, 1980-81

RANK	DISTRICTS Ranked by State-Local Funds Per Adjusted WFTEADA	NET FTEADA	WFTEADA ADJUSTED*	STATE SHARE OF TFP PER PUPIL WFTEADA ADJUSTED*	LOCAL SHARE OF TFP PER WFTEADA ADJUSTED*	WEALTH EQUALIZATION PER PUPIL WFTEADA ADJUSTED*	AMOUNT OF WEALTH EQUALIZATION PER DISTRICT
121	Weakley	5,331	8,798	$ 352	$ 38	$ 29	$ 255,142
122	Lexington	804	1,242	371	19	48	59,616
123	Campbell	7,835	14,264	375	15	52	741,728
124	Cocke	4,962	7,947	364	26	41	325,827
125	Union	2,268	3,644	372	18	49	178,556
126	Jefferson	6,063	10,409	362	28	39	405,951
127	Carroll	499	1,006	368	21	46	46,276
128	Maury City	428	681	354	36	31	21,111
129	Gadsden	373	629	356	33	34	21,386
130	Oneida	1,367	2,101	365	25	42	88,242
131	Lawrence	6,615	10,996	366	24	43	472,828
132	Madison	7,242	12,027	355	34	33	396,891
133	Bells	489	795	352	33	34	27,030
134	Haywood	4,397	7,122	345	44	23	163,806
135	Dekalb	2,483	4,114	364	26	41	168,674
136	Wayne	2,920	4,867	363	27	40	194,680

TABLE C-7

WEALTH EQUALIZATION EFFECTS RESULTING FROM INCLUDING IN THE TENNESSEE FOUNDATION PROGRAM, $54,120,717 AS THE LOCAL SHARE AND USING EQUALIZED ASSESSMENTS AS THE MEASURE OF LOCAL ABILITY, 1980-81

RANK	DISTRICTS Ranked by State-Local Funds Per Adjusted WFTEADA	NET FTEADA	WFTEADA ADJUSTED*	STATE SHARE OF TFP PER PUPIL WFTEADA ADJUSTED*	LOCAL SHARE OF TFP PER WFTEADA ADJUSTED*	WEALTH EQUALIZATION PER PUPIL WFTEADA ADJUSTED*	AMOUNT OF WEALTH EQUALIZATION PER DISTRICT
137	Pickett	751	1,280	$ 363	$ 27	$ 40	$ 51,200
138	Lauderdale	4,755	7,759	364	26	41	318,119
139	Trenton	1,597	2,674	359	31	36	96,264
140	Henderson	3,236	5,737	371	19	48	275,376
141	Macon	2,883	4,639	351	39	28	129,892
142	Crockett County	492	962	358	32	35	33,670
143	Grundy	2,834	4,568	374	16	51	232,968
144	Fayette	4,969	8,055	356	33	34	273,870
145	Grainger	3,273	5,360	369	20	47	251,920
146	Chester	2,231	3,669	359	24	43	157,767
147	Hancock	1,388	2,481	379	11	56	138,936

TABLE C-8

TRENDS IN STATE-LOCAL REVENUE RECEIPTS FOR PUBLC SCHOOLS, K-12
IN TENNESSEE LOCAL SCHOOL DISTRICTS
1947-48 through 1980-81

Fiscal Year	State Funds*	Percent State	Local Funds	Percent Local
1947-48	$ 44,575,664	57.0	$ 33,621,654	43.0
1951-52	63,135,110	60.2	41,817,750	39.8
1955-56	75,784,009	56.4	58,580,701	43.6
1959-60	100,612,804	55.5	80,669,428	44.5
1963-64	134,128,421	61.0	85,804,492**	39.0
1967-68	183,412,725	56.9	138,674,151	43.1
1971-72	245,478,145	52.0	233,947,883**	48.0
1975-76	375,293,353	50.5	367,722,105	49.5
1979-80	537,401,849	49.8	542,234,063	50.2
1980-81	553,353,609	48.1	597,396,054***	51.9

*State Retail Sales Taxes were enacted effective:
June 1, 1947 - 2 cents
June 1, 1955 - increased to 3 cents
June 1, 1971 - increased to 3½ cents
April 1, 1976 - increased to 4½ cents
Exclude state level payments to the retirement accumulation fund, for social security contributions and aged teachers' pensions.

**Local option retail sales taxes authorized:
In 1963 - 1/3 of state rate, $5.00 per article maximum.
In 1968 - Increased to 1/2 of state rate and $7.50 per article maximum.

***In 1980-81 the local option sales tax provided approximately 1/3 of all local revenues.

Source: Tennessee Department of Education, Annual Statistical Reports.

TABLE C-9

COUNTIES RANKED ACCORDING TO ESTIMATED CURRENT PROPERTY VALUE ADJUSTED BY PROPERTY EQUIVALENTS FOR TVA PAYMENTS

RANK	COUNTY	1980-81 ADA	ESTIMATED CURRENT PROPERTY VALUE 1981	TVA PROPERTY EQUIVALENT	ESTIMATED CURRENT PROPERTY VALUE + TVA PROPERTY EQUIVALENT	AMOUNT PER PUPIL ADA
1	DAVIDSON	65,509	12,219,732,519	27,443,864	12,247,176,383	186,954
2	MOORE	858	143,281,995	1,450,636	144,732,631	168,686
3	WILLIAMSON	11,192	1,669,325,258	6,815,409	1,676,140,667	149,762
4	SEVIER	7,790	1,071,791,438	6,244,955	1,078,036,393	138,387
5	HARDIN	4,452	587,961,791	10,174,000	598,135,791	134,352
6	HAMILTON	45,702	5,862,986,287	27,112,864	5,890,099,151	128,881
7	PICKETT	751	93,224,910	1,018,909	94,243,819	125,491
8	SULLIVAN	27,755	3,364,067,061	14,194,364	3,378,261,425	121,717
9	HUMPHREYS	3,321	382,175,672	13,205,636	395,381,308	119,055
10	VAN BUREN	846	97,705,038	2,433,455	100,138,493	118,367
11	CANNON	1,824	211,033,902	2,801,591	213,835,493	117,234
12	BLOUNT	14,770	1,683,975,304	9,474,682	1,693,449,986	114,655
13	KNOX	53,748	6,077,213,792	24,015,318	6,101,229,110	113,515
14	HENRY	4,660	514,016,460	12,689,000	526,705,460	113,027
15	SMITH	2,717	295,969,410	7,030,091	302,999,501	111,520
16	FAYETTE	4,969	547,601,823	4,819,500	552,421,323	111,174
17	WASHINGTON	16,049	1,753,570,397	7,519,227	1,761,089,624	109,732
18	MAURY	9,237	996,180,011	8,306,136	1,004,486,147	108,746
19	HAYWOOD	4,397	474,341,511	3,779,227	478,120,738	108,738
20	TROUSDALE	1,096	113,919,491	5,177,182	119,096,673	108,665
21	SHELBY	131,096	14,152,927,209	51,455,818	14,204,383,027	108,351
22	RUTHERFORD	16,110	1,724,195,266	8,739,636	1,732,934,902	107,569
23	CUMBERLAND	5,852	623,762,570	4,870,727	628,633,297	107,422
24	PUTNAM	8,089	855,621,521	4,275,409	859,896,930	106,304
25	MARSHALL	3,579	376,237,020	3,619,000	379,856,020	106,135

TABLE C-9

COUNTIES RANKED ACCORDING TO ESTIMATED CURRENT PROPERTY VALUE ADJUSTED BY PROPERTY EQUIVALENTS FOR TVA PAYMENTS

RANK	COUNTY	1980-81 ADA	ESTIMATED CURRENT PROPERTY VALUE 1981	TVA PROPERTY EQUIVALENT	ESTIMATED CURRENT PROPERTY VALUE + TVA PROPERTY EQUIVALENT	AMOUNT PER PUPIL ADA
26	COFFEE	7,950	794,743,515	5,194,591	799,938,106	105,394
27	WEAKLEY	5,331	543,829,369	4,579,682	548,409,051	102,872
28	McMINN	8,261	836,262,556	10,091,636	846,354,192	102,452
29	CROCKETT	2,823	285,047,685	2,099,682	287,147,367	101,717
30	OBION	6,639	657,388,652	4,517,091	661,905,743	99,700
31	WILSON	10,798	1,062,253,284	8,209,773	1,070,463,057	99,135
32	WARREN	6,149	598,805,832	7,472,864	606,278,696	98,598
33	MADISON	13,666	1,340,222,344	6,541,955	1,346,764,299	98,549
34	HICKMAN	2,799	269,624,401	5,195,136	274,819,537	98,185
35	HAMBLEN	9,855	959,202,828	6,474,182	965,677,010	97,989
36	LAKE	1,473	142,102,837	1,212,864	143,315,701	97,295
37	STEWART	1,626	137,128,629	20,931,591	158,060,220	97,208
38	LOUDON	5,631	528,111,108	19,089,364	547,200,472	97,176
39	JEFFERSON	6,063	574,824,160	13,079,364	587,903,524	96,966
40	GILES	4,532	430,943,177	4,723,773	435,666,950	96,131
41	PERRY	1,107	100,974,493	4,977,591	105,952,084	95,711
42	BEDFORD	5,357	507,866,326	4,452,136	512,318,462	95,635
43	ROBERTSON	6,941	659,430,256	4,138,409	663,568,665	95,601
44	SUMNER	17,957	1,707,224,981	9,438,500	1,716,663,481	95,599
45	DeKALB	2,483	235,268,480	2,059,045	237,327,525	95,581
46	GIBSON	9,336	880,633,720	5,446,409	886,080,129	94,910
47	BLEDSOE	1,644	151,740,016	3,466,091	155,206,107	94,409
48	MACON	2,883	264,562,559	5,719,545	270,282,104	93,750
49	McNAIRY	4,172	385,788,353	4,075,273	389,863,626	93,448
50	WHITE	6,182	556,047,446	3,992,227	560,039,673	90,592

TABLE C-9

COUNTIES RANKED ACCORDING TO ESTIMATED CURRENT PROPERTY VALUE ADJUSTED BY PROPERTY EQUIVALENTS FOR TVA PAYMENTS

RANK	COUNTY	1980-81 ADA	ESTIMATED CURRENT PROPERTY VALUE 1981	TVA PROPERTY EQUIVALENT	ESTIMATED CURRENT PROPERTY VALUE + TVA PROPERTY EQUIVALENT	AMOUNT PER PUPIL ADA
51	DICKSON	6,182	556,047,446	3,992,227	560,039,673	90,592
52	MEIGS	1,603	134,506,037	10,191,273	144,697,310	90,267
53	JOHNSON	2,587	226,996,045	3,877,818	230,873,863	89,244
54	GREENE	10,570	935,494,193	7,334,273	942,828,466	89,199
55	POLK	2,938	245,952,076	15,872,773	261,824,849	89,117
56	WAYNE	2,920	249,609,954	5,388,909	254,998,863	87,328
57	ANDERSON	13,457	1,159,863,356	12,305,409	1,172,168,765	87,105
58	JACKSON	1,604	137,121,846	2,084,909	139,206,755	86,787
59	BRADLEY	13,569	1,169,307,903	7,797,773	1,177,105,676	86,750
60	DYER	6,887	592,789,425	4,365,864	597,155,289	86,708
61	HAWKINS	8,517	712,169,414	17,544,273	729,713,687	85,677
62	LAWRENCE	6,615	560,704,031	5,139,409	565,843,440	85,539
63	TIPTON	6,510	551,183,780	4,024,682	555,208,462	85,285
64	CHESTER	2,231	187,645,814	2,050,864	189,696,678	85,028
65	LINCOLN	5,113	424,055,398	4,674,273	428,729,671	83,851
66	HANCOCK	1,388	114,710,431	1,514,773	116,225,204	83,736
67	ROANE	8,809	715,052,997	19,158,318	734,211,315	83,348
68	DECATUR	1,889	148,981,667	5,826,409	154,808,076	81,952
69	BENTON	2,736	210,180,044	13,119,636	223,299,680	81,615
70	UNICOI	3,161	252,002,048	1,765,318	253,767,366	80,281
71	MONTGOMERY	13,825	1,102,312,225	6,693,682	1,109,005,907	80,217
72	CHEATHAM	4,500	357,915,488	2,481,455	360,396,943	80,088
73	FRANKLIN	6,010	468,912,660	9,794,955	478,707,615	79,652
74	HARDEMAN	5,096	395,980,728	4,501,136	400,481,864	78,587

TABLE C-9

COUNTIES RANKED ACCORDING TO ESTIMATED CURRENT PROPERTY VALUE ADJUSTED BY PROPERTY EQUIVALENTS FOR TVA PAYMENTS

RANK	COUNTY	1980-81 ADA	ESTIMATED CURRENT PROPERTY VALUE 1981	TVA PROPERTY EQUIVALENT	ESTIMATED CURRENT PROPERTY VALUE + TVA PROPERTY EQUIVALENT	AMOUNT PER PUPIL ADA
75	OVERTON	3,402	261,512,244	3,079,864	264,592,108	77,775
76	HENDERSON	4,040	309,545,093	4,663,000	314,208,093	77,774
77	COCKE	5,788	439,640,161	7,174,591	446,814,752	77,197
78	FENTRESS	2,604	196,842,207	3,266,545	200,108,752	76,847
79	LEWIS	1,623	121,574,416	2,536,136	124,110,552	76,470
80	CARROLL	5,496	405,972,854	4,402,773	410,375,627	74,668
81	UNION	2,268	157,982,182	9,852,909	167,835,091	74,001
82	MONROE	5,957	416,519,627	17,709,364	434,228,991	72,894
83	LAUDERDALE	4,755	341,357,650	3,628,591	344,986,241	72,552
84	RHEA	4,834	329,959,540	14,358,545	344,318,085	71,228
85	CLAIBORNE	5,618	392,270,304	6,322,909	398,593,213	70,949
86	SEQUATCHIE	1,895	129,144,634	2,520,455	131,665,089	69,480
87	HOUSTON	1,403	91,615,696	2,903,273	94,518,969	67,369
88	CARTER	9,565	629,892,953	6,970,318	636,863,271	66,583
89	CLAY	1,607	102,457,628	1,530,045	103,987,673	64,709
90	MARION	5,037	303,807,288	15,301,727	319,109,015	63,354
91	MORGAN	3,432	213,003,381	3,870,409	216,873,790	63,192
92	GRAINGER	3,273	198,093,195	8,625,591	206,718,786	63,159
93	GRUNDY	2,834	175,751,211	2,877,864	178,629,075	63,031
94	SCOTT	4,136	256,914,853	3,657,864	260,572,717	63,001
95	CAMPBELL	7,835	420,703,604	9,531,818	430,235,422	54,912
	GRAND TOTAL	821,382	87,795,835,970	742,989,458	88,538,825,428	107,793 (Avg.)

Source: State Board of Equalization, 1981 Tax Aggregate Report of Tennessee
Tennessee Department of Education Records

TABLE C-10

POTENTIAL LOCAL RETAIL SALES TAX COLLECTIONS (1981) PER FTEADA PUPIL (1980-81)

RANK	COUNTY	1980-81 FTEADA	ONE-HALF OF 1981 STATE SALES TAX COLLECTIONS	ONE-HALF STATE SALES TAX PER PUPIL ADA
1	DAVIDSON	65,509	$ 79,205,990	$1,209
2	KNOX	53,748	45,596,648	848
3	HAMILTON	45,702	37,444,201	819
4	COFFEE	7,950	6,275,194	789
5	SEVIER	7,790	5,789,671	743
6	SHELBY	131,096	96,937,710	739
7	MADISON	13,666	9,812,787	718
8	ROANE	8,809	6,141,251	697
9	SULLIVAN	27,755	18,030,826	650
10	PUTNAM	8,089	4,997,448	618
11	WASHINGTON	16,049	9,722,907	606
12	HAMBLEN	9,855	5,712,874	580
13	BLOUNT	14,770	8,558,222	579
14	ANDERSON	13,457	7,749,546	576
15	HENRY	4,660	2,637,029	566
16	MAURY	9,237	5,223,822	566
17	RUTHERFORD	16,110	8,948,105	555
18	MONTGOMERY	13,825	7,236,393	523
19	MCMINN	8,261	4,240,301	513
20	BRADLEY	13,569	6,922,012	510
21	DYER	6,887	3,339,150	485
22	TROUSDALE	1,096	527,539	481
23	BEDFORD	5,357	2,520,086	470
24	OBION	6,639	3,087,338	465
25	HARDIN	4,452	2,065,347	464

TABLE C-10

POTENTIAL LOCAL RETAIL SALES TAX COLLECTIONS (1981) PER FTEADA PUPIL (1980-81)

RANK	COUNTY	1980-81 FTEADA	ONE-HALF OF 1981 STATE SALES TAX COLLECTIONS	ONE-HALF STATE SALES TAX PER PUPIL ADA
26	MARSHALL	3,579	$ 1,599,789	447
27	WARREN	6,149	2,742,061	446
28	GILES	4,532	1,974,312	436
29	GIBSON	9,336	4,009,560	429
30	CUMBERLAND	5,852	2,488,939	425
31	HUMPHREYS	3,321	1,412,590	425
32	DICKSON	6,182	2,559,992	414
33	SMITH	2,717	1,102,936	406
34	LINCOLN	5,113	2,058,135	403
35	GREENE	10,570	4,248,588	402
36	LAWRENCE	6,615	2,638,403	399
37	WILLIAMSON	11,192	4,466,365	399
38	MARION	5,037	1,976,662	392
39	WEAKLEY	5,331	2,092,064	392
40	DECATUR	1,889	727,333	385
41	MOORE	858	324,919	379
42	DEKALB	2,483	929,859	375
43	LOUDON	5,631	2,110,821	375
44	MEIGS	1,603	597,514	373
45	CAMPBELL	7,835	2,921,278	373
46	BENTON	2,736	1,009,854	369
47	FRANKLIN	6,010	2,175,945	362
48	HENDERSON	4,040	1,434,880	355
49	MONROE	5,957	2,103,360	353
50	WILSON	10,798	3,781,799	350

TABLE C-10

POTENTIAL LOCAL RETAIL SALES TAX COLLECTIONS (1981) PER FTEADA PUPIL (1980-81)

RANK	COUNTY	1980-81 FTEADA	ONE-HALF OF 1981 STATE SALES TAX COLLECTIONS	ONE-HALF STATE SALES TAX PER PUPIL ADA
51	COCKE	5,788	2,027,204	350
52	ROBERTSON	6,941	2,420,514	349
53	SCOTT	4,136	1,440,986	348
54	SUMNER	17,957	6,099,681	340
55	CARROLL	5,496	1,810,949	330
56	MCNAIRY	4,172	1,357,263	325
57	MACON	2,883	924,066	321
58	HAYWOOD	4,397	1,403,208	319
59	RHEA	4,834	1,525,388	316
60	UNICOI	3,161	995,544	315
61	CHESTER	2,231	692,919	311
62	HICKMAN	2,799	864,892	309
63	LAUDERDALE	4,755	1,467,959	309
64	LEWIS	1,623	502,569	309
65	FENTRESS	2,604	785,747	303
66	JEFFERSON	6,063	1,807,453	298
67	CARTER	9,565	2,812,901	294
68	JOHNSON	2,587	759,905	294
69	SEQUATCHIE	1,895	552,647	292
70	CANNON	1,824	522,182	286
71	TIPTON	6,510	1,848,556	284
72	OVERTON	3,402	956,469	281
73	LAKE	1,473	411,731	280
74	HARDEMAN	5,096	1,410,301	277

TABLE C-10

POTENTIAL LOCAL RETAIL SALES TAX COLLECTIONS (1981) PER FTEADA PUPIL (1980-81)

RANK	COUNTY	1980-81 FTEADA	ONE-HALF OF 1981 STATE SALES TAX COLLECTIONS	ONE-HALF STATE SALES TAX PER PUPIL ADA
75	PICKETT	751	$ 205,896	275
76	HAWKINS	8,517	2,206,445	259
77	PERRY	1,107	277,971	251
78	POLK	2,938	725,636	247
79	WAYNE	2,920	721,045	247
80	CROCKETT	2,823	655,553	232
81	CLAIBORNE	5,618	1,274,461	227
82	HOUSTON	1,403	308,005	220
83	STEWART	1,626	356,715	219
84	WHITE	6,182	1,339,493	217
85	FAYETTE	4,969	1,078,744	217
86	CHEATHAM	4,500	916,232	204
87	GRUNDY	2,834	578,905	204
88	UNION	2,268	451,668	199
89	CLAY	1,607	307,736	191
90	JACKSON	1,604	289,107	180
91	BLEDSOE	1,644	292,629	178
92	MORGAN	3,432	536,249	156
93	GRAINGER	3,273	469,792	144
94	HANCOCK	1,388	190,165	137
95	VAN BUREN	846	105,234	124

SOURCE: Calculated from Tennessee Department of Revenue, Monthly Statement of Revenue Collections, June 1981.

TABLE C-11

TRENDS IN EXPENDITURES FOR INSTRUCTION*

YEAR	SALARIES	OTHER COSTS OF INSTRUCTION	TOTAL	PERCENT OF CHANGE	PUPILS ENROLLED	INSTRUCTION COSTS PER PUPIL	PERCENT CHANGE PER PUPIL
1976-77	$ 491,783,025	$ 24,144,694	$ 515,927,719		908,286	$ 568.02	
1977-78	526,712,243	26,850,131	553,562,374	+ 7.3	905,020	611.66	+ 7.7
1978-79	567,674,555	27,691,155	595,365,710	+ 7.6	897,529	663.34	+ 8.4
1979-80	613,949,749	30,762,352	644,712,101	+ 8.3	883,773	729.50	+10.0
1980-81	656,755,641	32,150,550	688,906,191	+ 6.9	872,905	789.21	+ 8.2
1981-82					862,547		
1982-83					854,362		

*Other than Vocational Education and Education for the Handicapped

Source: Tennessee Department of Education, Annual Statistical Reports

TABLE C-12

TRENDS IN EXPENDITURES FOR VOCATIONAL EDUCATION

Year	Salaries*	Other costs of Instruction**	Total	Percent Change***	Pupils Net FTEADA	Average Cost Per Pupil	Percent Change***
1976-77	$33,391,623	$ 5,908,614	$39,300,237				
1977-78	40,806,326	12,266,119	53,072,445	35.0	39,704	$1,366.70	
1978-79	48,165,465	12,600,490	60,765,955	14.5	47,834	1,270.35	5.22
1979-80	57,028,521	18,324,308	75,352,829	24.0	48,677	1,548.01	21.85
1980-81	62,569,868	16,882,389	79,452,257	5.4	49,500	1,605.09	3.68
1981-82					48,317		

*Includes salaries of vocational teachers, supervisors, and other vocational salaries.

**Includes supplies and materials, equipment, travel, transportation, fixed charges. other contracted services for vocational education.

***From prior year.

TABLE C-13

TRENDS IN EXPENDITURES FOR EDUCATION OF THE HANDICAPPED*

Year	Salaries	Other Costs of Handicapped Instruction	Total	Percent Change	Pupils I & S**	Per pupil Cost	Percent Change
1976-77	$44,666,870	$ 5,860,161	$50,527,031		121,736	$415.05	
1977-78	52,455,008	10,608,015	63,063,023	24.8	123,900	508.98	22.6
1978-79	58,781,025	13,610,074	72,391,099	14.7	128,869	561.74	10.4
1979-80	68,887,055	17,048,947	85,936,002	18.7	132,719	647.50	15.3
1980-81	76,727,491	18,904,582	95,632,073	11.3	115,559***	827.56	27.8
1981-82					127,499		
1982-83							

*Does not include expenditures for regular classroom instruction.

**Identified and Served from preceding year.

***Changes in Legislation reduced the number that could be counted.

TABLE C-14

TRENDS IN EXPENDITURES FOR OPERATION AND MAINTENANCE OF PLANT
TENNESSEE LOCAL SCHOOL DISTRICTS, 1971-72 THROUGH 1980-81

Years Ending June 30,	Expenditures	Percent Change From Prior Year	Amount Per Pupil ADA	Percent Change From Prior Year	State Allocation Amount *	State Allocation Percent Of Cost
1972	53,035,858	+ 11.13	62.68	+ 10.70	9,337,174	17.60
1973	58,774,409	+ 10.82	69.46	+ 9.22	9,324,326	15.86
1974	63,820,059	+ 8.58	78.03	+ 12.34	8,917,832	13.97
1975	75,104,593	+ 17.68	91.21	+ 16.89	9,233,862	12.29
1976	84,426,555	+ 12.41	102.17	+ 12.02	10,989,032	13.02
1977	93,148,685	+ 10.33	113.36	+ 10.95	10,970,440	11.78
1978	105,829,124	+ 13.61	129.21	+ 13.98	*	
1979	117,492,056	+ 11.02	145.31	+ 12.46	*	
1980	129,334,791	+ 10.08	160.33	+ 10.34	*	
1981	146,427,076	+ 13.22	183.67	+ 14.56	*	

* Categorical allocation for maintenance and operation of school plant and for administration and fixed charges costs Beginning in 1977 this was discontinued and the funds placed in the TFP.

Source: Tennessee Department of Education, Annual Statistical Reports For Years Indicated

TABLE C-15

TRENDS IN EXPENDITURES FOR PUPIL TRANSPORTATION, GRADES K-12 TENNESSEE LOCAL SCHOOL DISTRICTS, 1971-72 THROUGH 1981-82

Years Ending June 30	Expenditures Amount	Present Change From Prior Year	Cost Per Pupil Transported	Per Cent Change	State Transportation Amount	State Capital Outlay Funds Used for Pupil Transportation	Total State Funds	State Per Cent of Cost
1971-72	$24,261,286	10.22	$ 50.41	2.98	$11,500,218	$ *	$ *	*
1972-73	27,463,785	13.20	55.20	9.50	11,837,272	*	*	*
1973-74	31,679,229	15.35	59.58	7.93	12,791,647	*	*	*
1974-75	37,767,426	19.22	69.30	16.31	13,889,647	2,344,413	16,234,060	42.98
1975-76	39,833,792	5.47	72.20	4.18	13,889,647	2,203,855	16,099,502	40.42
1976-77	44,870,079	12.64	80.23	11.12	13,990,618	*	*	*
1977-78	49,839,919	11.07	80.19	0	15,072,971	*	*	*
1978-79	54,321,805	8.99	89.36	11.44	16,573,000	3,194,917	19,767,917	36.39
1979-80	63,024,679	16.02	105.74	18.33	18,572,999	3,349,480	21,922,480	34.78
1980-81	67,389,962	6.93	113.31	7.16	18,572,999	2,994,708	21,517,707	31.93
1981-82	*	*	*	*	18,517,300	2,337,662	20,854,962	

*Data not available

Source: Tennessee Department of Education Records and Annual Statistical Reports for years indicated.

TABLE C-16

STATE CAPITAL OUTLAY STUDY

COMPARATIVE EXPENDITURES FOR TRANSPORTATION AND BUILDINGS

Year	Allocation	Contracted P. T. Ser.	Transp. Equipment	Total Transportation	Remaining for Buildings
1974-75	$11,904,600	$143,051	$2,201,362	$2,344,413	$9,559,587
1975-76	11,904,600	133,279	2,070,576	2,203,855	9,700,745
1978-79	11,904,600	161,410	3,033,507	3,194,917	8,709,683
1979-80	11,904,600	321,088	3,028,392	3,349,480	8,555,120
1980-81	11,904,600	181,082	2,763,626	2,944,708	8,959,892
1981-82	11,868,900	227,023	2,110,639	2,337,662	9,531,238

9/17/82

Source: Tennessee Department of Education Records

TABLE C-17

Trends in Expenditures and State Funds for Public School Capital Outlay: Tennessee Local School Districts

Year	Local School District Expenditures	Regular State Capital Outlay Funds Allocated*	State Bond Funds** Allocated to local School Districts For Vocational Facilities	Total State Funds Allocated to Local School Districts For Public School Capital Outlay	Percent State Funds of Local District Expenditures
1973-74	$ 73,733,692	$9,500,000***	$ - 0 -	$ 9,500,000	12.9
1974-75	102,658,956	9,559,587	5,936,665	15,496,252	15.1
1975-76	126,179,320	9,700,745	26,306,001	6,006,746	28.5
1976-77	93,903,531	9,400,000***	20,977,398	30,377,396	32.3
1977-78	116,713,192	9,000,000***	14,668,021	23,668,021	20.3
1978-79	134,745,191	8,709,683	9,213,325	17,923,008	13.3
1979-80	136,718,724	8,555,120	7,777,468	16,332,588	11.9
1980-81	104,941,590	8,959,892	6,313,249	15,273,141	14.6
1981-82	****	9,531,238	3,363,546	12,894,784	****

*Net amount for school plant facilities. (School districts used the remainder for pupil transportation (Table C-15)

**In addition to the $94,505,663 of state bond funds allocated to local school districts for public school vocational facilities capital outlay another $90,066,577 was spent directly by the state - over the same period of eight years.

**Projected - ****Data not available

SOURCE: Tennessee Department of Education Records

TABLE C-18

GROUP AVERAGE[a] REVENUES PER WEIGHTED PUPIL (ADJUSTED) FOR PUBLIC SCHOOLS

TENNESSEE LOCAL SCHOOL DISTRICTS,
1980-81

(Grouped by Level of State-Local Revenue per Adjusted WFTEADA[b])

Group	Number of Districts	Percent of State Adjusted WFTEADA (b)	State Share of TFP	Local Share of TFP	State Guarantee Funds (c)	State Categorical Grants (d)	Local Support Outside TFP	Total State-Local Funds	Federal Funds	Grand Total
1	4	2.00	$ 349	$ 41	$	$ 30	$ 695	$ 1,115	$ 117	$ 1,232
2	1	8.56	323	67		24	594	1,008	95	1,103
3	1	3.10	337	52		31	585	1,006	200	1,206
4	1	13.05	343	47		26	527	943	192	1,135
5	5	6.53	347	43	4	27	502	918	130	1,048
6	3	5.55	344	46	3	33	456	882	96	977
7	6	4.28	359	31	1	32	431	853	148	1,001
8	5	1.66	354	36		31	382	803	99	902
9	7	3.87	348	42		30	359	779	137	916
10	12	6.16	350	40	f	36	313	739	117	856
11	7	3.15	364	27	f	40	289	719	164	883
12	8	5.84	356	34	f	38	279	707	108	815
13	14	6.04	355	34	1	43	253	687	122	809
14	10	4.33	359	31		39	242	672	136	808
15	14	8.11	361	30		38	223	651	144	795
16	11	4.24	362	27	f	44	202	636	137	773
17	13	4.31	362	27		41	192	623	146	769
18	10	4.59	365	25	f	39	181	610	148	758
19	15	4.62	362	28	f	48	140	578	218	796

[a] Group average computed by dividing aggregate group revenue by total group weighted pupil ADA

[b] (WFTEADA + weighted identified and served handicapped) x T & E factor

[c] T.C.A. 49-607

[d] Includes transportation, textbooks, leave for teachers, capital outlay driver education, and vocational education

[f] LEA received guarantee amount of less than $.50 per WFTEADA

Source: Tennessee Department of Education Financial Settlement and Annual Statistical Report, 1980-81

TABLE C-19

GROUP AVERAGE[a] REVENUES PER PUPIL FOR PUBLIC SCHOOLS ADA*
TENNESSEE LOCAL SCHOOL DISTRICTS, 1980-81

Group	Number of Districts	Percent of State ADA	State Share of TFP	Local Share of TFP	State Guarantee Funds (b)	State Categorical Grants (c)	Local Support Outside TFP	Total State-Local Funds	Federal Funds	Grand Total
1	4	1.89	$ 626	$ 73	$	$ 54	$ 1,245	$ 1,998	$ 208	$ 2,206
2	1	7.98	585	121		43	1,077	1,826	173	1,999
3	1	3.10	574	89		53	996	1,712	341	2,053
4	1	12.90	586	80		44	902	1,612	328	1,940
5	5	6.00	589	73	d	46	850	1,558	221	1,779
6	3	5.70	564	75	4	54	748	1,445	156	1,601
7	6	4.12	630	54	1	57	755	1,497	260	1,757
8	5	1.73	574	58		51	619	1,302	160	1,462
9	7	3.99	570	68		48	588	1,274	225	1,499
10	12	6.28	580	66	1	60	519	1,226	195	1,421
11	7	3.02	640	47	d	71	509	1,267	289	1,556
12	8	6.02	582	56	1	60	457	1,156	177	1,333
13	14	6.16	589	57	2	71	419	1,138	203	1,341
14	10	4.44	593	51		64	399	1,107	224	1,331
15	14	8.23	601	49		64	371	1,085	240	1,325
16	11	4.40	589	45	d	72	330	1,036	222	1,258
17	13	4.28	616	47	d	69	327	1,059	249	1,308
18	10	4.58	618	42		66	306	1,032	251	1,283
19	15	4.71	599	46		79	233	957	361	1,318

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[a] Group average computed by dividing aggregate group revenue by total group pupils ADA

[b] T.C.A. 49-607

[c] Includes transportation, textbooks, leave for teachers, capital outlay, driver education and vocational education

[d] LEA received guarantee amount of less than $.50 per WFTEADA

*ADA = Average daily attendance best two of first three school months

Source: Tennessee Department of Education, Financial Settlement Documents & Annual Statistical Report Year Ending June 30, 1981

TABLE C-20

A STUDY OF RELATIVE TAXPAYING ABILITY OF TENNESSEE COUNTIES

COUNTY	ESTIMATED PROPERTY VALUE --- 1981 % OF STATE TOTAL	ONE-HALF STATE SALES TAX COLLECTIONS 1981-82 % OF STATE TOTAL	TVA PAYMENTS 1981- % OF STATE TOTAL	PERCENT PROPERTY x .64020	PERCENT SALES TAX x .33016	PERCENT TVA PAYMENT x .02964	PERCENT TAX PAYING ABILITY 1983-84
ANDERSON	1.321	1.578	1.656	.845	.521	.049	1.415
BEDFORD	.578	.513	.599	.370	.169	.018	.557
BENTON	.239	.205	1.765	.153	.068	.052	.273
BLEDSOE	.173	.059	.466	.111	.019	.014	.144
BLOUNT	1.918	1.743	1.275	1.228	.575	.038	1.841
BRADLEY	1.332	1.410	1.049	.853	.466	.031	1.350
CAMPBELL	.479	.595	1.282	.307	.196	.038	.541
CANNON	.240	.106	.377	.154	.035	.011	.200
CARROLL	.462	.368	.592	.296	.121	.018	.435
CARTER	.717	.573	.938	.459	.189	.028	.676
CHEATHAM	.408	.186	.333	.261	.061	.010	.332
CHESTER	.214	.141	.276	.137	.047	.008	.192
CLAIBORNE	.447	.259	.851	.286	.086	.025	.397
CLAY	.117	.062	.205	.075	.020	.006	.101
COCKE	.501	.412	.965	.321	.136	.029	.486
COFFEE	.905	1.278	.699	.579	.422	.021	1.022
CROCKETT	.325	.133	.282	.208	.044	.008	.260
CUMBERLAND	.710	.507	.655	.455	.167	.019	.641
DAVIDSON	13.184	16.134	3.693	8.440	5.327	.109	14.876
DECATUR	.170	.148	.784	.108	.049	.023	.180
DeKALB	.268	.189	.277	.172	.062	.008	.242
DICKSON	.633	.521	.537	.405	.172	.016	.593
DYER	.675	.680	.587	.432	.225	.017	.674
FAYETTE	.624	.219	.648	.399	.072	.019	.490
FENTRESS	.224	.160	.439	.143	.053	.013	.209
FRANKLIN	.534	.443	1.318	.342	.146	.039	.527

TABLE C-20

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COUNTY	ESTIMATED PROPERTY VALUE --- 1981 % OF STATE TOTAL	ONE-HALF STATE SALES TAX COLLECTIONS 1981-82 % OF STATE TOTAL	TVA PAYMENTS 1981- % OF STATE TOTAL	PERCENT PROPERTY x .64020	PERCENT SALES TAX x .33016	PERCENT TVA PAYMENT x .02964	PERCENT TAX PAYING ABILITY 1983-84
GIBSON	1.003	.816	.733	.642	.269	.022	.933
GILES	.491	.402	.635	.314	.133	.019	.466
GRAINGER	.226	.095	1.160	.145	.031	.034	.210
GREENE	1.066	.865	.987	.682	.286	.029	.997
GRUNDY	.200	.117	.387	.128	.039	.011	.178
HAMBLEN	1.093	1.163	.871	.700	.384	.026	1.110
HAMILTON	7.937	7.627	3.649	4.275	2.518	.108	6.901
HANCOCK	.131	.038	.203	.084	.013	.006	.103
HARDEMAN	.451	.287	.605	.289	.095	.018	.392
HARDIN	.670	.420	1.369	.429	.139	.041	.609
HAWKINS	.811	.449	2.361	.521	.148	.070	.739
HAYWOOD	.540	.285	.508	.346	.094	.015	.455
HENDERSON	.353	.292	.627	.226	.096	.019	.341
HENRY	.585	.537	1.707	.375	.177	.051	.603
HICKMAN	.307	.176	.699	.197	.058	.021	.276
HOUSTON	.104	.062	.390	.067	.020	.012	.099
HUMPHREYS	.435	.287	1.777	.278	.095	.053	.426
JACKSON	.156	.058	.280	.100	.019	.008	.127
JEFFERSON	.655	.368	1.760	.419	.121	.052	.592
JOHNSON	.259	.154	.521	.166	.051	.015	.232
KNOX	6.922	9.288	3.232	4.431	3.067	.096	7.594
LAKE	1.619	.083	.163	1.036	.027	.005	1.068
LAUDERDALE	.389	.299	.488	.249	.099	.014	.362
LAWRENCE	.639	.537	.691	.409	.177	.020	.606
LEWIS	.138	.102	.341	.088	.034	.010	.132
LINCOLN	.483	.419	.629	.309	.138	.019	.466

TABLE C-20

A STUDY OF RELATIVE TAXPAYING ABILITY OF TENNESSEE COUNTIES

COUNTY	ESTIMATED PROPERTY VALUE --- 1981 % OF STATE TOTAL	ONE-HALF STATE SALES TAX COLLECTIONS 1981-82 % OF STATE TOTAL	TVA PAYMENTS 1981- % OF STATE TOTAL	PERCENT PROPERTY x .64020	PERCENT SALES TAX x .33016	PERCENT TVA PAYMENT x .02964	PERCENT TAX PAYING ABILITY 1983-84
LOUDON	.602	.429	2.569	.385	.142	.076	.603
McMINN	.953	.863	1.358	.610	.285	.040	.935
McNAIRY	.439	.276	.548	.281	.091	.016	.388
MACON	.272	.188	.769	.193	.062	.023	.278
MADISON	1.427	1.998	.880	.978	.660	.026	1.664
MARION	.346	.402	2.059	.222	.133	.061	.416
MARSHALL	.429	.325	.487	.275	.107	.014	.396
MAURY	1.135	1.064	1.117	.727	.351	.033	1.111
MEIGS	.153	.121	1.371	.098	.040	.041	.179
MONROE	.474	.428	2.383	.303	.141	.071	.515
MONTGOMERY	1.256	1.474	.900	.807	.487	.027	1.321
MOORE	.163	.066	.195	.104	.022	.006	.132
MORGAN	.243	.109	.520	.156	.036	.015	.207
OBION	.749	.628	.607	.480	.207	.018	.705
OVERTON	.298	.194	.414	.191	.064	.012	.267
PERRY	.115	.056	.669	.096	.018	.020	.134
PICKETT	.106	.041	.137	.068	.014	.004	.086
POLK	.280	.147	2.136	.179	.049	.063	.291
PUTNAM	.975	1.018	.575	.624	.336	.017	.977
RHEA	.376	.310	1.932	.241	.102	.057	.400
ROANE	.814	1.251	2.578	.521	.413	.076	1.010
ROBERTSON	.751	.493	.556	.481	.163	.016	.660
RUTHERFORD	1.964	1.822	1.176	1.257	.602	.035	1.894
SCOTT	.293	.293	.492	.188	.097	.015	.200
SEQUATCHIE	.147	.112	.339	.094	.037	.010	.141
SEVIER	1.221	1.179	.840	.782	.389	.025	1.196

TABLE C-20

A STUDY OF RELATIVE TAXPAYING ABILITY OF TENNESSEE COUNTIES

COUNTY	ESTIMATED PROPERTY VALUE --- 1981 % OF STATE TOTAL	ONE-HALF STATE SALES TAX COLLECTIONS 1981-82 % OF STATE TOTAL	TVA PAYMENTS 1981- % OF STATE TOTAL	PERCENT PROPERTY x .64020	PERCENT SALES TAX x .33016	PERCENT TVA PAYMENT x .02964	PERCENT TAX PAYING ABILITY 1983-84
SHELBY	16.120	19.746	6.925	10.320	6.519	.205	17.044
SMITH	.337	.224	.946	.216	.074	.028	.318
STEWART	.156	.072	2.817	.100	.024	.083	.207
SULLIVAN	3.832	3.673	1.910	2.453	1.213	.057	3.723
SUMNER	1.945	1.242	1.270	1.245	.410	.038	1.693
TIPTON	.628	.376	.541	.402	.124	.016	.542
TROUSDALE	.130	.107	.696	.083	.035	.021	.139
UNICOI	.287	.202	.237	.184	.067	.007	.258
UNION	.180	.092	1.326	.115	.030	.039	.184
VAN BUREN	.111	.021	.327	.071	.007	.010	.088
WARREN	.682	.558	1.005	.437	.184	.030	.651
WASHINGTON	1.997	1.980	1.012	.803	.654	.030	1.487
WAYNE	.284	.146	.725	.182	.048	.021	.251
WEAKLEY	.619	.424	.616	.396	.140	.018	.554
WHITE	.393	.272	.652	.252	.090	.019	.361
WILLIAMSON	1.901	.909	.917	1.217	.300	.027	1.544
WILSON	1.210	.770	1.104	.775	.254	.033	1.062

* Ability to support schools is measured by each county's share of the three wealth factors which constitutes the local tax base: Estimated value of property; Local Option Sales Tax (Potential); and TVA Payments. Each factor is given importance according to its overall contribution in providing current revenues.

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